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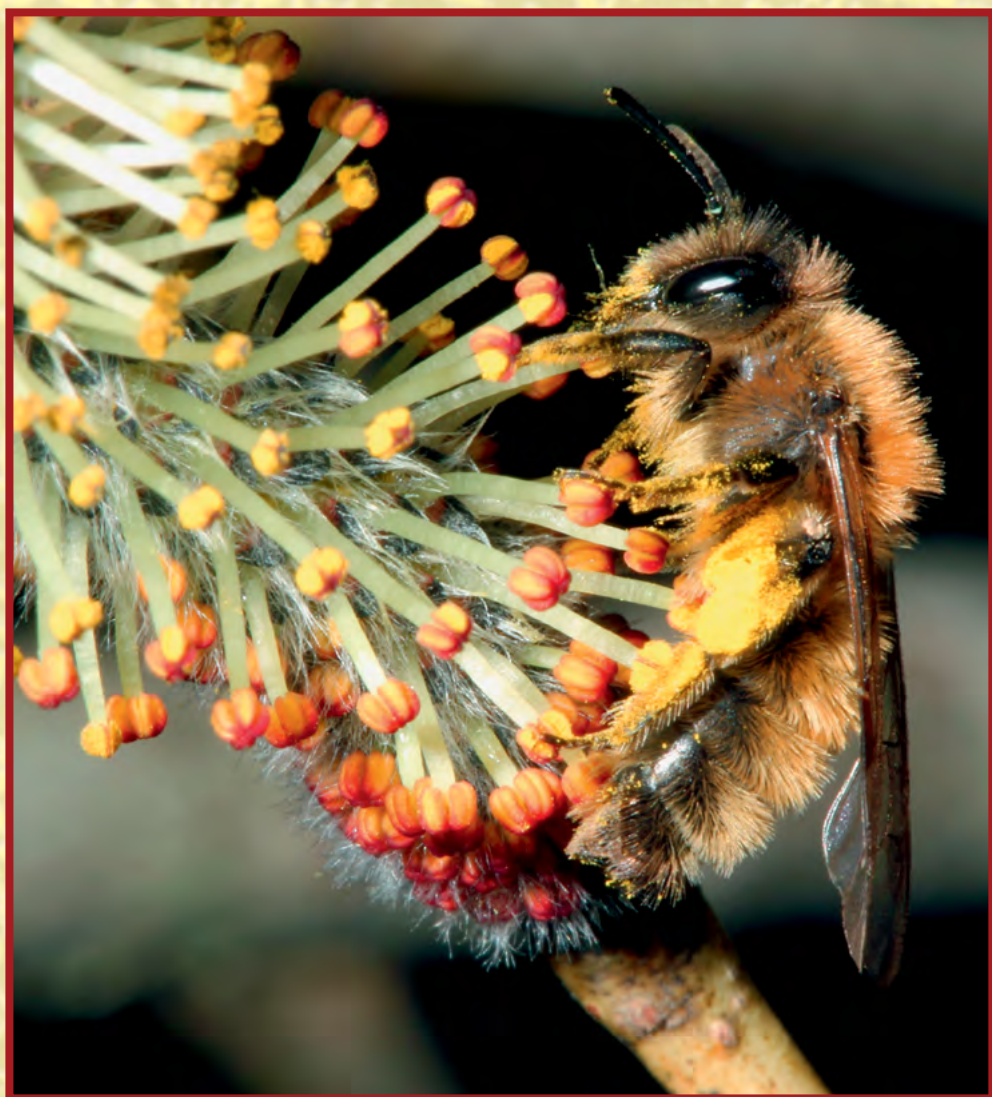
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**Peščinske čebele v Sloveniji
(Hymenoptera: Apoidea: Andrenidae)**

**Andrenid bees of Slovenia
(Hymenoptera: Apoidea: Andrenidae)**

Andrej GOGALA¹

Izvleček

Podatki o razširjenosti 131 vrst čebel iz družine Andrenidae v Sloveniji so zbrani iz literature, zbirk Prirodoslovnega muzeja Slovenije in s terenskih opazovanj. Vrste so predstavljene s fotografijami živih primerkov v naravi ali prepariranih primerkov iz zbirk Prirodoslovnega muzeja Slovenije. Pripravljene so karte razširjenosti. *Apis atra* Scopoli, 1763, ki je do zdaj veljala za sinonim vrste *Andrena cineraria* (Linnaeus), je sinonimizirana z vrsto *Andrena barbareae* Panzer, 1805.

Ključne besede: Hymenoptera, Aculeata, Apoidea, Andrenidae, favna, Slovenija

Abstract

Data on the distribution of 131 species of Andrenid bees in Slovenia are compiled from literature, collections of the Slovenian Museum of Natural History and field observations. Species are illustrated with photographs of live specimens in nature or mounted specimens from the collections of the Slovenian Museum of Natural History. Maps of the species' distribution are also given. *Apis atra* Scopoli, 1763, until now thought to be a synonym of *Andrena cineraria* (Linnaeus), is synonymized with *Andrena barbareae* Panzer, 1805.

Key words: Hymenoptera, Aculeata, Apoidea, Andrenidae, fauna, Slovenia

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Uvod

Andrenidae so velika družina kratkorilih čebel, ki je razširjena na vseh celinah razen Avstralije, a redka v vlažnih tropih (MICHENER, 2000). Vse vrste gnezdiijo v zemlji, v rovih, ki jih skopljejo same. Celice so nameščene na koncu stranskih rogov. Pri večini vrst so obložene z izločkom, ki ga samice čebel namažejo na stene s pomočjo pigidijske plošče na 6. tergitu in dlak, ki jo obdajajo, verjetno pa tudi z bazalno štrlečo ploščico na zgornji ustni. Oblika obeh plošč je pomemben razlikovalni znak, kot so tudi obrazne jamice, pri samicah iz rodu *Andrena* prekrivane s kratkimi, tankimi a gostimi dlačicami. Ker so pod povrhnjico jamic žlezne celice (SCHUBERTH & SCHÖNITZER, 1993), so jamice verjetno površine za izparevanje hlapljivih izločkov. Njihova sestava in vloga nista poznani, a ko v mrežo ujamemo samico peščinske čebele, lahko zavohamo prijeten vonj. Večina vrst družine Andrenidae je samotarska, nekatere pa imajo komunska gnezda.

Raziskava slovenske favne čebel se je pričela z I. A. Scopolijem, ki je v svojo knjigo 'Entomologia carniolica' (1763) vključil opise petih vrst iz rodu *Andrena* in ene iz rodu *Panurgus*. Vse čebele je sicer uvrščal v rod *Apis*. Prvenstvo je priznано dvema vrstama, to sta *Andrena praecox* in *Panurgus calcaratus*. Njegova *Apis atra* je bila sinonimizirana z vrsto *Andrena cineraria* (Linnaeus), a kasneje smo prepoznali tri vrste v sorodstvu *A. cineraria*. Tudi identiteta preostalih treh Scopolijevih vrst ni jasna.

Druga pomembna osebnost v zgodovini raziskav čebel v Sloveniji je Dr. Evgen Jaeger, zdravnik v Podčetrtku in entomolog v prostem času. Rod *Andrena* ga je še posebej zanimal in leta 1934 je objavil opis vrste *Andrena hedikae*. Njegova zbirka je ohranjena v Prirodoslovnem muzeju Slovenije v Ljubljani in verjetno vsebuje vse vrste, ki jih je lahko našel v okolici Podčetrтка v svojem času. Del njegove zbirke je shranjen v Hrvaškem prirodoslovnem muzeju (Hrvaški narodni zoološki muzej do leta 1986) v Zagrebu (VOGRIN, 1955). Več podatkov o vrstah čebel v zahodnem delu Slovenije je v letih 1892 in 1902 objavil Eduard Graeffe, ki je deloval v Trstu.

Introduction

Andrenidae is a large family of short-tongued bees, distributed in all continents except Australia, but rare in moist tropics (MICHENER, 2000). All species nest in the soil, in burrows dug by them. Cells are located at the end of lateral tunnels. In most species they are lined with a secretion applied to the wall by the female bee with the help of a pygidial plate on the 6th tergite with associated fimbriae and probably also by the basal elevated plate on the labrum. The shape of both plates is an important distinguishing character, as are also the facial foveae, which are covered with short fine dense hairs in females of the genus *Andrena*. As there are secretory cells beneath the foveal cuticle (SCHUBERTH & SCHÖNITZER, 1993), foveae are probably evaporative surfaces for volatile excretions. Their composition and function are unknown, but we can smell a pleasant scent when a female *Andrena* is caught in the net. Most andrenid species are solitary, while some have communal nests.

Study of the Slovenian bee fauna started with I. A. Scopoli who included descriptions of five *Andrena* and one *Panurgus* species in his book 'Entomologia carniolica' (1763). All bees were classified into the genus *Apis*, though. Priority is recognized for two of them, *Andrena praecox* and *Panurgus calcaratus*. His *Apis atra* was synonymized with *Andrena cineraria* (Linnaeus), but since then three species have been recognized in the *A. cineraria* complex. The identity of other three Scopoli's *Andrena* species is also not clear.

Another important figure in the history of bee studies in Slovenia is Dr. Evgen Jaeger, physician in Podčetrtek and entomologist in his spare time. He was particularly interested in the genus *Andrena*; he published the description of *Andrena hedikae* in 1934. His collection is preserved in the Slovenian Museum of Natural History in Ljubljana and probably contains all species he could find in the vicinity of Podčetrtek in his time. Part of his collection is preserved in the Croatian Natural History Museum (Croatian National Zoological Museum until 1986) in Zagreb (VOGRIN, 1955). Several records of bee species from the western part of Slovenia were published in 1892 and 1902 by Eduard Graeffe who worked in Trieste.

Taksonomske težave so z več vrstami bivoltinih vrst rodu *Andrena*, pri katerih se poletni primerki morfološko rahlo razlikujejo od pomladne generacije. Pravzaprav ne vemo, ali so res potomci primerkov pomladne generacije, ali se del primerkov po prezimovanju prebudi spomladi, drugi del pa poleti. Če je resnična druga možnost, se s časom lahko razvijeta dve ločeni, a tesno sorodni vrsti.

There are taxonomic problems with several bivoltine *Andrena* species, with specimens of the summer generation slightly differing morphologically from the spring generation. Actually, we do not know whether they really descended from the specimens of the spring generation or whether one part of the specimens activate in the spring after overwintering and another part in the summer. If the latter possibility is true, two distinct albeit closely related species may evolve over time.

Material in metode

Podatki o najdbah peščinskih čebel v Sloveniji so zbrani iz literature, primerkov v zbirkah Prirodoslovnega muzeja Slovenije (zbirki E. Jaeger in avtorja), s terenskih opazovanj in iz nekaj primerkov drugih zbirateljev, ki jih je določil avtor. Podatki o biologiji in geografski razširjenosti so povzeti iz literature (npr. SCHEUHL & WILLNER, 2016, WESTRICH, 2018, ASCHER & PICKERING, 2019) in dopolnjeni z lastnimi opazovanji. Na kartah razširjenosti v Sloveniji so najdbe do leta 1979 označene z zeleno, od 1980 do 1999 z oranžno in od 2000 naprej z rdečo barvo. Vrste so predstavljene s fotografijami živih primerkov v naravi ali prepariranih primerkov iz zbirke Prirodoslovnega muzeja Slovenije. Lokalitetam so dodani pripadajoči UTM-kvadranti 10 x 10 km, da bi se izognili zamenjavi lokalitete s podobno imenovanimi kraji drugje. E. Jaeger je natančnejše lokalitete v bližini Podčetrka označeval le s kraticami, katerih pomen pa nam je pogosto neznan. Kjer nam je znan, je najprej navedena kratica (npr. OL) in nato interpretacija (Olimje).

Materials and methods

Data on the findings of Andrenid bees in Slovenia are compiled from literature, specimens in the collections of the Slovenian Museum of Natural History (collections by E. Jaeger and the author), field observations and some specimens of other collectors, identified by the author. Data on the biology and geographical distribution are gathered from literature (e.g. SCHEUHL & WILLNER, 2016, WESTRICH, 2018, ASCHER & PICKERING, 2019) and supplemented with own observations. On the maps of the species' distribution in Slovenia, the records up to 1979 are marked with green, from 1980 to 1999 with orange and from 2000 onwards with red colours. The species are illustrated with photographs of live specimens in nature or mounted specimens from the collections of the Slovenian Museum of Natural History. Localities are classified into UTM 10 km squares to avoid confusion with similarly named localities elsewhere. E. Jaeger labelled exact localities around Podčetrtek only with initials, the meaning of which is not always known. Where known, the initials are stated first (e.g. OL) and then its interpretation (Olimje).

Okrajšave / Abbreviations:

leg. = legit / nabral / collected by

vid. = videt / videl / seen by

det. = določil / determined by

PMSL = Zbirka Prirodoslovnega muzeja Slovenije v Ljubljani /
Collection of the Slovenian Museum of Natural History in Ljubljana

Zg. = Zgornji / Upper

Sp. = Spodnji / Lower

Pl. = Planina / Montane pasture

Sv. = Sveti / St.

Seznam vrst / List of species

Andreninae

Genus *Andrena* Fabricius, 1775

Subgenus *Aenandrena* Warncke, 1968

Andrena aeneiventris Morawitz, 1872

Mediterranska vrsta. V Sloveniji na Krasu (submediteransko območje). Polilektična vrsta, obiskuje predvsem Apiaceae in Brassicaceae. Bivoltina, dejavna maja in junija ter julija in avgusta.

Mediterranean species. In Slovenia on the Karst plateau (sub-Mediterranean region). Polylectic species, visiting mainly Apiaceae and Brassicaceae. Bivoltine, active in May and June and in July and August.

Gräffe, 1895: Piran; Gogala, 1999

Brje pri Komnu, VL07, 23. 7. 1995 on *Ferulago campestris*, 1♀, A. Gogala leg., PMSL

Famlje, Školj, VL25, 20. 7. 1999 on Apiaceae, 1♀, A. Gogala leg., PMSL

Andrena hedikae Jaeger, 1934

Mediterranska vrsta. V Sloveniji znana le po štirih sintipnih primerkih, ki jih je zbral E. Jaeger pri Podčetrtku (subpanonsko območje). Verjetno polilektična vrsta, ki obiskuje predvsem Apiaceae in Brassicaceae. Bivoltina, dejavna aprila in maja ter od junija do avgusta. Dr. Evgen Jaeger (1892–1959) je bil zdravnik v Podčetrtku in ljubiteljski entomolog. Vrsto *Andrena hedikae* je poimenoval v čast svoje žene Hedike (GLASER & GOGALA, 1999), ne pa po nemškem entomologu Hansu Hedickeju, kot so nekoč mislili (ime čebele so zato nekateri avtorji pisali kot *A. hedickae*).

Mediterranean species. In Slovenia known only from 4 syntype specimens collected near Podčetrtek (sub-Pannonian region) by E. Jaeger. Probably polylectic species, visiting mainly Apiaceae and Brassicaceae. Bivoltine, active in April and May and from June to August.

Dr. Evgen Jaeger (1892–1959) was a physician in Podčetrtek and an amateur entomologist. He named *Andrena hedikae* in honour of his wife Hedika (GLASER & GOGALA, 1999), not after the German entomologist Hans Hedicke as once thought (the name of the bee was written as *A. hedickae* by some authors for this reason).

Jaeger, 1934: Podčetrtek, 6. – 8., on Apiaceae; GOGALA, 1994 (as *A. hedickae*), 1999

Podčetrtek, WM41, 15. 6. 1932, 1♀ (“typ”), 6. 8. 1932, 1♀ (“typ”), 18. 6. 1932, 1♀ (“typ”), 15. 6. 1931, 1♀ (“typ”), E. Jaeger leg., PMSL (GOGALA, 1994)



Slika / Figure 1: *Andrena aeneiventris* female from Brje pri Komnu, Kras, collected in July 1995.



Slika / Figure 2: *Andrena hedikae* female, a syntype specimen from Podčetrtek, collected by E. Jaeger in June 15, 1932.

Subgenus *Agandrena* Warncke, 1968

Andrena agilissima (Scopoli, 1770)

Andrena flessae Panzer, 1805

Zahodnomediterranska vrsta. V Sloveniji v dolini Soče, pri Strunjanu (submediteransko območje) in Mariboru (subpanonsko območje). Oligolektična, specializirana za Brassicaceae. Verjetno komunska vrsta. Univoltina, dejavna maja in junija.

West Mediterranean species. In Slovenia in the Soča valley, near Strunjan (sub-Mediterranean region) and Maribor (sub-Pannonian region). Oligolectic, specialized on Brassicaceae. Probably communal species. Univoltine, active from May to June.

Graeffe, 1902: dolina Soče, 5.; Gogala, 1994, 1999

Maribor, WM55, 15. 5. 1921, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Strunjan, Belvedere, UL94, 22. 6. 1994 on *Sinapis*, 1♂, A. Gogala leg., PMSL



Slika / Figure 3: *Andrena agilissima* male from Strunjan, Istria, collected in June 1994.

Subgenus *Andrena* Fabricius, 1775*Andrena apicata* Smith, 1847

Evrosibirska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna marca in aprila.

Eurosiberian species, widely distributed in Slovenia. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active in March and April.

VOGRIN, 1955: Podčetrtek, 3. – 10. 3.; GOGALA, 1994, 1999; ZANDIGIACOMO & al. 2013: 108—
Lippiza (= Lipica) (coll. Gräffe)
Podčetrtek, WM41, 10. 3. 1934, 1♂, 20. 3. 1935, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Prekmurje: Bukovnica, XM07, 29. 2. 1992, 1♂, S. Gomboc leg. (GOGALA, 1994)
Ljubljana, Savlje, VM60, 10. 3. 1992 on *Salix*, 2♀1♂, A. Gogala leg.; PMSL
Polhov Gradec, VM40, 8. 4. 1992, 1♀, A. Gogala leg., PMSL
Iška, VL68, 17. 3. 1994, 1♀, A. Gogala leg., PMSL
Vinje pri Moravčah, VM71, 3. 4. 1997, 1♀, A. Gogala leg., 12. 3. 1997, 1♂, A. Gogala leg., PMSL
Palško jezero, VL46, 21. 3. 2000 on *Salix*, 1♀, A. Gogala leg., PMSL
Nova Gorica, Solkan, UL99, 13. 3. 1993, 1♂, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♂, A. Gogala leg., PMSL
Kranj, Stražišče, VM42, 11. 3. 1995, 1♂, T. Trilar leg., PMSL
Ig, Draga, VL68, 11. 3. 2009 on *Tussilago farfara*, 1♂, A. Gogala leg., PMSL
Ljubljana, Črnuče, VM60, 21. 3. 1993, 1♀, A. Gogala leg., PMSL
Dol pri Ljubljani, ob Savi, VM70, 14. 4. 2006, 1♀, A. Gogala leg., PMSL
Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala vid.
Ig, ob Iščici (along the Iščica river), VL69, 2. 4. 2019, 1♀, A. Gogala vid.

Andrena clarkella (Kirby, 1802)

Holarктиčna vrsta. V dinarskem, predalpskem in subpanonskem območju Slovenije. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna marca in aprila.

Holarctic species. In the Dinaric, pre-Alpine, pre-Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active in March and April.

VOGRIN, 1955: Podčetrtek, 10. 3., 12. 4.; GOGALA, 1991, 1994, 1999
Podčetrtek, WM41, 10. 3. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Ljubljana, Savlje, VM60, 7. 3. 1992, 1♀, A. Gogala leg., PMSL
Podpeč, VL59, 19. 3. 1992, 1♀, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♀, A. Gogala leg., PMSL
Vinje pri Moravčah, VM71, 12. 3. 1997, 1♀, A. Gogala leg., PMSL
Palško jezero, VL46, 21. 3. 2000 on *Salix*, 1♀, A. Gogala leg., PMSL
Iška, VL68, 17. 3. 1994, 1♂, A. Gogala leg., PMSL
Ig, Draga, VL68, 14. 3. 1997, 1♂, A. Gogala leg., PMSL
Nanos, VL27, 27. 3. 1977, 2♀, V. Furlan leg., PMSL
Črna vas, breg Iške, VL59, 8. 5. 1999 on *Salix*, 1♀, A. Gogala vid.
Vrhnika, Verd, VL49, 23. 3. 2011, 1♀, A. Gogala vid.
Vel. Račna, Radensko polje, VL78, 29. 3. 2011 on *Salix*, 1♀, photo A. Gogala

***Andrena fucata* Smith, 1847**

Evropska vrsta. V Sloveniji v Polhograjskem hribovju (predalpsko območje) in na Snežniku (dinarsko območje). Polilektična vrsta. Univoltina, dejavna od aprila do junija.

European species. In Slovenia in Polhograjsko hribovje (pre-Alpine region) and on Mt. Snežnik (Dinaric region). Polylectic species. Univoltine, active from April to June.

GOGALA, 1999

Topol, Grmada, VM40, 19. 6. 1993 on Apiaceae, 1♀, A. Gogala leg., PMSL

Snežnik, 1600 m, VL54, 3. 6. 2000, 1♂, A. Gogala leg., 16. 6. 2011, 1♀, A. Gogala leg., PMSL, 1700 m, 18. 6. 2013 on *Salix*, 1♀, photo A. Gogala

***Andrena fulva* (Müller, 1766)**

Andrena fulva (Schrank, 1781)

Andrena armata (Gmelin, 1790)

Evropska vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina, dejavna od marca do maja.

European species, widely distributed in Slovenia. Polylectic species. Univoltine, active from March to May.

GOGALA, 1994, 1999

Podčetrtek, WM41, 29. 3. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 6. 3. 1992, 1♀, A. Gogala leg., PMSL, 21. 4. 2011 on *Ribes rubrum*, 1♀, photo A. Gogala, 6. 5. 2018, 1♀, A. Gogala vid.

Gorjansko, UL97, 11. 4. 1992, 1♀1♂, A. Gogala leg., PMSL

Nova Gorica, Solkan, UL99, 13. 3. 1993, 1♀, A. Gogala leg., PMSL

Ljubljana, Črnuče, VM60, 21. 3. 1993, 1♀, A. Gogala leg., PMSL

Ustje, Uhanje, VL18, 6. 3. 1994, 1♀, A. Gogala leg., PMSL

Dragomer, VL59, 10. 4. 1993, 1♂, A. Gogala leg., 29. 3. 1997 on *Vaccinium*, 1♂, A. Gogala leg., PMSL, Debeli hrib, 25. 4. 2004 on *Vaccinium*, 1♀, A. Gogala vid., 10. 4. 2010, 1♀, A. Gogala vid.

Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala leg., PMSL

Dragonja, Stena, UL93, 24. 3. 1995, 1♀, A. Gogala leg., PMSL

Velenje, Škale, WM03, 3. 4. 2004, 1♀, M. Štangelj leg., PMSL

Blatna Brezovica, VL49, 23. 3. 2001, 1♀ on *Salix*, photo A. Gogala

Hrastnik, WM01, 27. 3. 1998, 1♀, A. Kapla leg., det. A. Gogala

Otočec, WL17, 27. 3. 1994 on *Prunus*, 1♀, A. Gogala vid.

Dobrova, VM50, 1. 4. 1995, 1♀, A. Gogala vid.

Kranj, Brdo, VM52, 8. 5. 2007, 1♀, A. Gogala vid.

Vremščica, VL26, 21. 5. 2011, 1♀ on *Berberis*, A. Gogala vid.

Iški Vintgar, VL68, 16. 3. 2012, 1♀, A. Gogala vid.

Brje pri Komnu, VL07, 22. 4. 2017, 1♀ on *Taraxacum*, A. Gogala vid., 20. 4. 2019, 1♀, A. Gogala vid.

Vel. Račna, Radensko polje, VL78, 22. 3. 2019, 1♀ on *Salix*, A. Gogala vid.

Andrena helvola (Linnaeus, 1758)

Evropska vrsta, široko razširjena v Sloveniji. Evropski vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina, dejavna od aprila do junija. Polilektična vrsta. Univoltina, dejavna od aprila do junija.

VOGRIN, 1955: Podčetrtek, 29. 3., 2. – 28. 4., 15. 5.; GOGALA, 1991, 1994, 1999
Podčetrtek, WM41, 25. 3. 1934, 1♀, 29. 3. 1934, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
Log, Lukovica, VL59, 27. 5. 1992, 1♀, A. Gogala leg., 4. 4. 1994, 1♂, A. Gogala leg., PMSL
Polhov Gradec, VM40, 30. 3. 1994, 1♀, A. Gogala leg., PMSL
Kamniška Bistrica, VM63, 7. 5. 1995, 1♀, A. Gogala leg., PMSL
Pl. Vogar, VM12, 24. 5. 1996, 1♀, A. Gogala leg., PMSL
Kum: Ključevica, WM00, 8. 5. 1998, 1♀, A. Gogala leg., PMSL
Krim, Planina, VL59, 3. 4. 2001, 1♀, A. Gogala leg., PMSL
Preserje, Vrh, VL58, 7. 4. 1991, 1♂, A. Gogala leg., PMSL
Črni Vrh, VM40, 29. 4. 1995, 1♂, A. Gogala leg., PMSL
Iški Vintgar, VL68, 6. 5. 1995, 1♂, A. Gogala leg., 19. 4. 2008 on *Omphalodes verna*, 1♂, A. Gogala leg., PMSL, 20. 4. 2018, 1♀, A. Gogala vid.
Videm, Vareja, WM73, 20. 4. 1996, 1♂, A. Gogala leg., PMSL
Vinje pri Moravčah, VM71, 3. 4. 1997, 1♂, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 30. 5. 1996, 1♂, A. Gogala leg., 2. 6. 1993, 1♀, A. Gogala leg., PMSL
Divača, Dane, VL25, 12. 4. 2008 on *Prunus spinosa*, 1♀, A. Gogala leg., PMSL
Snežnik, 1700 m, VL54, 16. 6. 2011, 1♀, A. Gogala leg., PMSL

Andrena lapponica Zetterstedt, 1838

Boreomontanska vrsta. Razširjena v alpskem, predalpskem in dinarskem območju Slovenije. Oligolektična, specializirana za rod *Vaccinium* (Ericaceae), z izjemo populacije na Snežniku v Dinaridih, ki je polilektična. Univoltina, dejavna od aprila do junija. Boreo-montane species. Distributed in the Alpine, pre-Alpine and Dinaric regions of Slovenia. Oligolectic, specialized on *Vaccinium* (Ericaceae), with the exception of the population on Mt. Snežnik in the Dinaric mountains, which is polylectic. Univoltine, active from April to June.

GOGALA, 1994, 1999, 2011
Dragomer, VL59, 14. 4. 1992, 1♀, A. Gogala leg., 29. 3. 1997 on *Vaccinium*, 1♀, A. Gogala leg., PMSL
Dragomer, Debeli hrib, VL59, 25. 4. 2004 on *Vaccinium myrtillus*, 1♀, photo A. Gogala
Smrekovec, 1520 m, VM94, 2. 6. 1999 on *Vaccinium myrtillus*, 1♀1♂, A. Gogala leg., PMSL
Snežnik, 1600 m, VL54, 3. 6. 2000, 1♀, A. Gogala leg., 1700 m, 25. 6. 2008 on *Salix*, 1♀, A. Gogala leg., PMSL, 1780 m, 30. 6. 2010 on *Helianthemum*, 1♀, photo A. Gogala
Log, Lukovica, VL59, 6. 4. 1993, 1♂, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♂, A. Gogala leg., PMSL
Kamniška Bistrica, VM63, 31. 3. 1994, 2♂, A. Gogala leg., PMSL, 1♀, A. Gogala vid.

Andrena mitis Schmiedeknecht, 1883

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna od marca do maja. European species, widely distributed in Slovenia. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active from March to May.

VOGRIN, 1955: Podčetrtek, 23. – 25. 4., 10. 5.; GOGALA, 1994, 1999
Podčetrtek, WM41, 25. 4. 1932, 1♀1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
Predgrad, Laze, WL03, 12. 3. 1994 on *Salix*, 2♀, A. Gogala leg., PMSL
Ljubljana, Črnuče, VM60, 23. 3. 1994 on *Salix*, 2♀, A. Gogala leg., PMSL
Dobova, Mihalovec, WL58, 27. 3. 1994 on *Salix*, 1♀, A. Gogala leg., PMSL
Sp. Šturmovci, WM73, 20. 4. 1996, 1♀, A. Gogala leg., PMSL
Vonarje, WM41, 9. 4. 1997, 1♀2♂, A. Gogala leg., PMSL
Štatanberg, WM53, 7. 4. 1994, 2♂, A. Gogala leg., PMSL, 1♀, A. Gogala vid.
Dol pri Ljubljani, ob Savi, VM70, 1. 4. 2006, 1♂, A. Gogala leg., 14. 4. 2006, 1♀, A. Gogala leg., PMSL
Ustje, Uhanje, VL18, 28. 4. 1994, 1♀, A. Gogala leg., PMSL
Dolsko, Senožeti, VM80, 3. 5. 2006, 1♀, A. Gogala leg., PMSL

Andrena praecox (Scopoli, 1763)

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna od marca do maja. European species, widely distributed in Slovenia. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active from March to May.

SCOPOLI, 1763: Carniola; VOGRIN, 1955: Podčetrtek, 29. 3., 22. – 27. 4.; GOGALA, 1994, 1999
Podčetrtek, WM41, 23. 4. 1932, 1♀, 8. 3. 1936, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
Podpeč, VL59, 19. 3. 1992, 1♀, A. Gogala leg., PMSL
Cerkniško jezero: Dol. Jezero, VL56, 25. 4. 1992, 2♀, A. Gogala leg., PMSL
Ljubljana, Črnuče, VM60, 19. 3. 1993, 2♀2♂, A. Gogala leg., 3. 3. 1994 on *Tussilago*, 1♀, A. Gogala leg., PMSL, 9. 3. 1994 on *Salix*, 1♀, photo A. Gogala, 25. 3. 2011, 1♀, A. Gogala vid., Tomačevski prod, 19. 4. 2013, 1♀, A. Gogala vid.
Koštabona, Škrline, VL03, 5. 3. 1994 on *Salix*, 1♀1♂, A. Gogala leg., PMSL
Buje, VL25, 18. 3. 1994, 1♂, A. Gogala leg., PMSL
Vinje pri Moravčah, VM71, 12. 3. 1997, 1♀1♂, A. Gogala leg., PMSL
Ig, Draga, VL68, 14. 3. 1997, 1♂, A. Gogala leg., PMSL
Izvir Rižane, VL14, 7. 3. 1998, 1♂, A. Gogala leg., PMSL
Predgrad, Laze, WL03, 12. 3. 1994 on *Salix*, 1♀, A. Gogala leg., PMSL
Bohinj: Ukanc, VM02, 24. 4. 1994, 1♀, A. Gogala leg., PMSL
Bevke, VL49, 17. 4. 1996, 1♀, A. Gogala leg., PMSL
Borovnica, Ohonica, VL58, 1. 4. 1998, 1♀, A. Gogala leg., PMSL
Planinsko polje: Laze, VL47, 15. 3. 1997 on *Salix*, 1♀, A. Gogala leg., PMSL
Dol pri Ljubljani, ob Savi, VM70, 1. 4. 2006, 1♀, A. Gogala leg., PMSL
Vel. Račna, Radensko polje, VL78, 9. 4. 2006, 1♀, A. Gogala leg., PMSL, 29. 3. 2011 on *Salix*, 1♀, photo A. Gogala, 29. 3. 2012, 1♀, photo A. Gogala, 1. 4. 2016, 2♀, A. Gogala vid., 28. 3. 2017, 2♀ on *Salix*, A. Gogala vid., 22. 3. 2019, 1♀ on *Salix*, A. Gogala vid.
Palško jezero, VL46, 21. 3. 2000 on *Salix*, 1♂, A. Gogala leg., PMSL

Sp. Pirniče, VM51, 10. 3. 1994 on *Salix*, 1♀, A. Gogala vid.
 Polhov Gradec, VM40, 30. 3. 1994 on *Salix*, 1♀, A. Gogala vid.
 Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala vid.
 Bohinjska Bistrica, Brod, VM12, 24. 4. 1994 on *Salix*, 1♀, A. Gogala vid.
 Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala vid.
 Hrastovlje, VL14, 7. 3. 1998 on *Salix*, 1♀, A. Gogala vid.
 Dobrova, Gabrje, VM50, 5. 4. 1999, 1♀, A. Gogala vid.
 Blatna Brezovica, VL49, 23. 3. 2001, 1♀, A. Gogala vid.
 Dol pri Ljubljani, Senožeti, VM80, 17. 3. 2017, 1♀ on *Salix*, A. Gogala vid.

Andrena rogenhoferi Morawitz, 1872

Alpska vrsta. V Sloveniji v Alpah ter na Čavnu in Snežniku v Dinaridih. Ena samica je bila najdena pri vrhu Malega Triglava, na višini 2700 m! Polilektična vrsta. Univoltina, dejavna od maja do avgusta.

Alpine species. In Slovenia in the Alps and on Mt. Čaven and Mt. Snežnik in the Dinaric mountains. One female found at the peak of Mali Triglav, 2700 m a.s.l.! Polylectic species. Univoltine, active from May to August.

GOGALA, 1991; EBMER, 1997: Karavanke, Košutnikov turn, 1700 m, 22. 7. 1996, 1♀; Gogala, 1999, 2011

Triglav: Mali Triglav, 2700 m, VM13, 7. 8. 1991 on *Potentilla nitida*, 1♀, A. Gogala leg., PMSL

Bohinj: Ukanc, VM02, 24. 4. 1994 on *Salix*, 2♂, A. Gogala leg., PMSL

Snežnik, 1600 m, VL54, 28. 6. 2008 on *Rosa pendulina*, 1♀, photo A. Gogala, 1700 m, 30. 6. 2010 on *Salix*, 1♀, photo A. Gogala, 1650 m, 16. 6. 2011 on *Myrrhis odorata*, 1♂, A. Gogala leg., PMSL, 1780 m, 3. 6. 2000, 1♀, A. Gogala vid.

Čaven: Kucelj, VL08, 10. 7. 2010 on *Laserpitium siler*, 1♀, A. Gogala vid., 16. 6. 2018 on *Laserpitium siler*, 1♀, A. Gogala vid.

Zg. Gorjuše, 1020 m, VM23, 11. 7. 2019 on *Laserpitium latifolium*, 1♀, A. Gogala leg.

Andrena varians (Rossi 1792)

Evropska vrsta. V Sloveniji je bil pri Hrpeljah na Krasu (submediteransko območje) najden le en primerek. Polilektična vrsta. Univoltina, dejavna aprila in maja.

European species. In Slovenia only one specimen found near Hrpelje on the Kras plateau (sub-Mediterranean region). Polylectic species. Univoltine, active in April and May.

GOGALA, 1999

Hrpelje – Kozina, VL15, 17. 5. 1996, 1♀, A. Gogala leg., PMSL



Slika / Figure 4: *Andrena apicata* male on *Tussilago farfara*. Ig, Draga, March 2009.



Slika / Figure 5: *Andrena clarkella* female from Savlje, Ljubljana, collected along the Sava river in March 1992.



Slika / Figure 6: *Andrena fucata* female on *Salix*. Snežnik, 1700 m, June 2013.



Slika / Figure 7: *Andrena fulva* female on *Ribes rubrum*. Lukovica pri Brezovici, April 2011.



Slika / Figure 8: *Andrena helvola* male on *Omphalodes verna*. Iški Vintgar, April 2008.



Slika / Figure 9: *Andrena lapponica* female on *Vaccinium myrtillus*. Dragomer, Debeli hrib, April 2004.



Slika / Figure 10: *Andrena mitis* female from Sp. Šturmovci, Ptuj, collected in April 1996.



Slika / Figure 11: *Andrena praecox* female on *Salix*. Vel. Račna, Radensko polje, March 2011.



Slika / Figure 12: *Andrena rogenhoferi* female resting on a branch of *Pinus mugo* after collecting pollen on the *Rosa* bush nearby. Snežnik, 1600 m, June 2008.



Slika / Figure 13: *Andrena varians* female from Hrpelje-Kozina, Kras, collected in May 1996.

Subgenus *Biareolina* Dours, 1873

Andrena lagopus Latreille, 1809

Biareolina neglecta Dours, 1873

Zahodnomediterranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Brassicaceae. Univoltina, dejavna od aprila do junija.

West Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Brassicaceae. Univoltine, active from April to June.

Warncke, 1967b: 576—Podčetrtek; GOGALA, 1994, 1999

Podčetrtek, WM41, 6. 4. 1934, 1♂, 12. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Ustje, Uhanje, VL18, 28. 4. 1994, 5♀, A. Gogala leg., PMSL

Kostanjevica, WL37, 13. 5. 1994, 1♀, A. Gogala leg., PMSL

Petanjci, WM86, 9. 4. 1995, 1♂, A. Gogala leg., PMSL

Obrež, Grabe, WM94, 22. 4. 1995, 1♂, A. Gogala leg., PMSL

Gaberje, Koboli, VL17, 1. 5. 1995, 1♀, A. Gogala vid.



Slika / Figure 14: *Andrena lagopus* female from Uhanje, Ustje, Vipava valley, collected in April 1994.

Subgenus *Brachyandrena* Pittioni, 1948

Andrena colletiformis Morawitz, 1874

Mediterranska vrsta. V Sloveniji ob obali (submediteransko območje). Polilektična vrsta. Univoltina, dejavna junija in julija.

Mediterranean species. In Slovenia along the coast (sub-Mediterranean region). Polylectic species. Univoltine, active in June and July.

GRÄFFE, 1895: Piran; GOGALA, 1999; ARIANA & al., 2009: 36—Portorož Sečovlje, Fontanigge, UL93, 10. 7. 1994, 1♀, A. Gogala leg., PMSL
Strunjan, UL94, 22. 7. 1994, 1♀, A. Gogala leg., PMSL



Slika / Figure 15: *Andrena colletiformis* female from Strunjan, Istria, collected in July 1994.

Subgenus *Charitandrena* Hedicke, 1933

Andrena hattorfiana (Fabricius, 1775)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Dipsacaceae. Univoltina, dejavna od maja do avgusta.

West Palaearctic species, widely distributed in Slovenia. Oligolectic, specialized on Dipsacaceae. Univoltine, active from May to August.

GRÄFFE, 1895: Lipica, Hrpelje; VOGGRIN, 1955: Podčetrtek, 13. – 27. 5.; ERLANDSSON, 1979: Vojnik, 28. 6. 1961, 1♀; GOGALA, 1991, 1994, 1999, 2018b
Logarska dol., VM74, 24. 7. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Podčetrtek, WM41, 28. 5. 1931, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Prekmurje: Bukovnica, XM07, 25. 7. 1992, 1♀, S. Gomboc leg. (GOGALA, 1994)
Ig, Kremenica, VL68, 26. 6. 1976, 1♀, S. Brelih leg. (GOGALA, 1994)
Log, Lukovica, VL59, 18. 6. 1991, 1♀, A. Gogala leg., 14. 8. 1991, 1♀, A. Gogala leg., 27. 5. 1992, 1♀, A. Gogala leg., 29. 5. 1991, 1♂, A. Gogala leg., 28. 5. 1991, 1♂, A. Gogala leg., PMSL, 8. 6. 1989 on *Knautia arvensis*, 1♀, photo A. Gogala, 30. 5. 2008 on *Knautia arvensis*, 1♂, photo A. Gogala
Radovna, VM24, 1. 6. 1993, 1♀, A. Gogala leg., PMSL
Sp. Pirniče, VM51, 8. 6. 1995, 1♀, A. Gogala leg., PMSL
Kurešček, VL68, 6. 6. 1992, 1♂, A. Gogala leg., PMSL



Slika / Figure 16: *Andrena hattorfiana* female with red pollen of *Knautia illyrica*. Rakov Škocjan, June 2010.

- Vremščica, VL26, 4. 7. 1992, 1♂, A. Gogala leg., PMSL, 30. 6. 2007, 1♀, A. Gogala vid.
 Boč, WM42, 15. 5. 1994, 1♂, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 2. 6. 1991, 1♂, A. Gogala leg., PMSL, 3. 6. 2017 on *Knautia*, 1♀, A. Gogala vid., 3. 6. 2018, 1♀, A. Gogala vid.
 Hrastnik, Krnice, WM00, 26. 5. 1997, 1♂, M. Gogala leg., PMSL
 Bohinj: Ukanc, VM02, 8. 7. 1992, 1♂, A. Gogala leg., PMSL
 Koritnice, VL45, 20. 5. 1994, 1♀, S. Polak leg., det. A. Gogala
 Rakitna, VL58, 20. 5. 1997, 1♂, I. Bischoff leg., det. A. Gogala
 Dobova, Mihalovec, WL58, 13. 5. 1994, 1♂, A. Gogala vid.
 Iški Vintgar, VL68, 27. 5. 1995, 1♂, A. Gogala vid., 4. 6. 2019 on *Knautia*, 1♀, A. Gogala vid.
 Strunjan, UL94, 27. 6. 1995 on *Knautia*, 1♀, A. Gogala vid.
 Vonarje, WM41, 8. 6. 1996, 1♀, A. Gogala vid.
 Črni Vrh, Smolnik, VM40, 29. 5. 1997, 1♀, A. Gogala vid.
 Dragonja, UL93, 10. 6. 1997, 1♂, A. Gogala vid.
 Hrastnik, WM01, 6. 6. 1999, 1♀, A. Gogala vid.
 Cerknjsko jezero, Laze, VL56, 24. 6. 1999, 1♂, A. Gogala vid.
 Nanos, VL27, 21. 7. 2001, 1♀1♂, A. Gogala vid.
 Nanos: Sv. Hieronim, VL27, 30. 7. 2016, 1♀, A. Gogala vid.
 Črnuče, Jarški prod, VM60, 1. 6. 2005, 1♀, A. Gogala vid., 2. 7. 2013, 1♀, A. Gogala vid.
 Jurišče, Kršičevcevec, VL45, 5. 8. 2005, 1♀, A. Gogala vid., 11. 7. 2010, 1♀1♂, A. Gogala vid.
 Kranj, Brdo, VM52, 12. 7. 2007, 1♀, A. Gogala vid.
 Dol pri Lj., Kleče, VM70, 26. 5. 2006, 1♂, 13. 6. 2006 on *Knautia*, 1♀, A. Gogala vid.
 Polhov Gradec, Setnica, VM40, 6. 6. 2009, 1♀, A. Gogala vid.
 Rakov Škocjan, VL47, 23. 6. 2010 on *Knautia illyrica*, 1♀, photo A. Gogala
 Pl. Vogar, VM12, 2. 7. 2010, 1♀, photo A. Gogala
 Čaven: Kucelj, VL08, 10. 7. 2010, 1♀, A. Gogala vid.
 Krka, Trebnja Gorica, VL88, 3. 6. 2016 on *Knautia*, 1♀, A. Gogala vid.
 Lukovec, Golec, VL07, 18. 6. 2016 on *Knautia*, 1♀, A. Gogala vid.

Subgenus *Chlorandrena* Pérez, 1890

Andrena agnata Warncke, 1967

Zahodnomediterranska vrsta. V Sloveniji v Istri in dolini Branice (submediteransko območje). Oligolektična, specializirana za Asteraceae Cichorioideae (npr. *Taraxacum*) (lastna opazovanja). Univoltina, dejavna aprila in maja.

Vrste *Andrena agnata* ne najdemo v določevalnih ključih za države srednje Evrope. Je podobna vrsti *A. livens* Pérez, a ima drobnejše in redkejšo pore na tergih, posebno na tretjem tergitu, kjer razdalje med porami merijo 2-3 premere por (le en premer ali manj pri *A. livens*) (WARNCKE, 1967a, GUSENLEITNER & SCHWARZ, 2002). Genitalije samcev vrste *A. agnata* se

West Mediterranean species. In Slovenia in Istria and the Branica valley (sub-Mediterranean region). Oligolectic, specialized on Asteraceae Cichorioideae (e.g. *Taraxacum*) (pers. obs.). Univoltine, active in April and May.

Andrena agnata is not present in the determination keys for the Central European countries. It is similar to *A. livens* Pérez, but has finer and more sparse punctation of the terga, especially on the third tergum, where the distances between punctures are 2-3 puncture diameters large (only 1 diameter or less in *A. livens*) (WARNCKE, 1967a, GUSENLEITNER & SCHWARZ, 2002). The male genitalia of

raho razlikujejo od genitalij samcev vrste *A. livens*, trikotne lopatice gonostilov imajo dvignjen, zaokrožen notranji rob. Zadnje goleni in stopala samic so precej oranžni, svetlejši od drugih delov telesa, tako kot pri *A. livens*, a samice drugih vrst podrodu *Chlorandrena* v Sloveniji imajo temne zadnje noge.

A. agnata slightly differ from those of *A. livens*, triangular blades of gonostyli have raised, rounded inner edge. Hind tibiae and tarsi of females are largely orange, lighter than other parts of the body, like in *A. livens*, but females of other species of *Chlorandrena* in Slovenia have dark hind legs.

GOGALA, 1999

Sp. Branica, Čipnje, VL07, 23. 5. 1993, 1♀, A. Gogala leg., F. Gusenleitner det. 1994, PMSL

Strunjan, UL94, 17. 4. 1995, 1♀1♂, A. Gogala leg., PMSL

Strunjan, Belvedere, UL94, 5. 4. 2008 on *Crepis*, 1♂, A. Gogala leg., PMSL, 1♀1♂, photo A. Gogala

Dragonja, UL93, 16. 4. 1996, 1♂, A. Gogala leg., PMSL

Krkavče, Rov, UL93, 12. 4. 2012, 1♂, T. Trilar leg., PMSL

Andrena clypella Strand, 1921

Vzhodnomediterranska vrsta. V Sloveniji le pri Podčetrtku (subpanonsko območje). Univoltina, dejavna maja in junija.

Za samico vrste *Andrena clypella* je značilna gosta punktacija tergitov. Pore so razmeroma velike in ploske, nimajo dvignjenih robov kot pri drugih vrstah podrodu *Chlorandrena*. Opis podajata GUSENLEITNER & SCHWARZ, 2002.

East Mediterranean species. In Slovenia only at Podčetrtek (sub-Pannonian region). Univoltine, active in May and June.

Andrena clypella female is characterized by dense punctation of the terga. Punctures are relatively large and flat, not with raised edges like in other species of the subgenus *Chlorandrena*. Description is given by GUSENLEITNER & SCHWARZ, 2002.

GOGALA, 1994, 1999

Podčetrtek, OL – Olimje, WM41, 16. 5. 1946, 1♀, E. Jaeger leg., F. Gusenleitner det. 1993, PMSL

Andrena humilis Imhoff, 1832

Andrena fulvescens Smith, 1847

Palaearktična vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Asteraceae Cichorioideae. Univoltina, dejavna od aprila do junija.

Palaearctic species, widely distributed in Slovenia. Oligolectic, specialized on Asteraceae Cichorioideae. Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 29. 4., 6.-20. 5., 2. 6.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 30. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Topolovec, VL03, 9. 5. 1991, 1♀1♂, A. Gogala leg., PMSL

Kregolišče, VL07, 1. 6. 1991, 1♀, A. Gogala leg., 19. 4. 1992, 2♂, A. Gogala leg., PMSL

Log, Lukovica, VL59, 1. 5. 1993, 1♀, A. Gogala leg., 29. 4. 1990, 1♂, A. Gogala leg., 29. 5. 1991, 1♂, A. Gogala leg., PMSL

Dobova, Mihalovec, WL58, 8. 6. 1994, 1♀, A. Gogala leg., 27. 3. 1994, 1♀, A. Gogala leg., PMSL

Cerknica, Dol. Jezero, VL56, 9. 5. 1995, 1♀, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 14. 4. 1991, 1♂, A. Gogala leg., PMSL
 Vremščica, VL26, 9. 5. 1992, 1♂, A. Gogala leg., PMSL
 Strunjan, UL94, 17. 4. 1995, 1♂, A. Gogala leg., PMSL
 Dolsko, Senožeti, VM80, 3. 5. 2006, 1♀, A. Gogala leg., PMSL
 Movraž, Movraška vala, VL13, 18. 5. 1990, 1♂, A. Gogala leg., PMSL
 Pl. Vogar, VM12, 7. 7. 1995, 1♂, A. Gogala leg., 25. 7. 1940, 1♀, M. Hafner leg., PMSL
 Kum: Lontovž, WM00, 8. 5. 1998, 1♂, A. Gogala leg., PMSL
 Komen, Volčji Grad, VL07, 2. 5. 2006 on *Crepis*, 1♀, photo A. Gogala
 Rakov Škocjan, VL47, 21. 6. 2008, 1♀, photo A. Gogala
 Dane, VL16, 19. 5. 1997, 1♂, I. Bischoff leg., det. A. Gogala
 Kostanjevica na Krki, WL37, 13. 5. 1994, 1♀, A. Gogala vid.
 Boč, WM42, 15. 5. 1994, 1♂, A. Gogala vid.
 Sela na Krasu, UL97, 30. 4. 1995, 1♂, A. Gogala vid.
 Metlika, Drašiči, WL25, 3. 6. 1995, 1♀, M. Gogala leg., A.G. vid.
 Krim, VL58, 25. 5. 1996, 1♂, A. Gogala vid.
 Tržič, Visoče, VM43, 10. 5. 1998, 1♀1♂, A. Gogala vid.

Andrena taraxaci Giraud, 1861

Palearktična vrsta. V submediteranskem, preddinarskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Asteraceae Cichorioideae. Univoltina, dejavna od marca do maja.

Palaearctic species. In the sub-Mediterranean, pre-Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Asteraceae Cichorioideae. Univoltine, active from March to May.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 25. 4. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Brje pri Komnu, VL07, 24. 3. 1991, 1♀3♂, A. Gogala leg., 1. 5. 1991, 1♀, A. Gogala leg., 31. 3. 1991, 1♂, A. Gogala leg., PMSL, 8. 4. 2007 on *Taraxacum*, 1♀, photo A. Gogala, 30. 3. 2008 on *Bellis perennis*, 1♂, photo A. Gogala, 26. 3. 2017, 2♀, A. Gogala vid., 21. 4. 2019 on *Taraxacum*, 1♀, A. Gogala vid.

Trstelj, UL97, 10. 4. 1991, 1♀1♂, A. Gogala leg., PMSL

Krka, VL88, 7. 5. 1994, 1♀, A. Gogala leg., PMSL

Petanjci, WM86, 9. 4. 1995, 1♀1♂, A. Gogala leg., PMSL

Strunjan, Belvedere, UL94, 24. 3. 2001, 1♂, A. Gogala leg., PMSL



Slika / Figure 17: *Andrena agnata* female on *Crepis*. Strunjan, Istria, April 2008.



Slika / Figure 18: *Andrena agnata* female, left: head with facial foveae and thorax, right: abdomen and hind legs.



Slika / Figure 19: *Andrena agnata*, male genitalia.



Slika / Figure 20: *Andrena clypella*, abdomen of the female from Podčetrtek, collected in May 1946.



Slika / Figure 21: *Andrena humilis* female with pollen load, searching for entrance to her burrow. Rakov Škočjan, June 2008.



Slika / Figure 22: *Andrena taraxaci* female on *Taraxacum*. Brje pri Komnu, Kras, April 2007.

Subgenus *Chrysandrena* Hedicke, 1933*Andrena fulvago* (Christ, 1791)

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Asteraceae Cichorioideae. Univoltina, dejavna od maja do julija. European species, widely distributed in Slovenia. Oligolectic, specialized on Asteraceae Cichorioideae. Univoltine, active from May to July.

VOGRIN, 1955: Podčetrtek, 15. – 16. 5., 22. 6.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 28. 5. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Kozina, Glavica, VL14, 23. 6. 1991, 1♀1♂, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 7. 7. 1990, 1♀, A. Gogala leg., 24. 7. 1991, 1♀, A. Gogala leg., 20. 6. 1991, 1♂,
 A. Gogala leg., 4. 7. 1991, 1♂, A. Gogala leg., PMSL, 26. 6. 2008 on *Crepis*, 1♀, photo A. Gogala
 Črnotiče, VL14, 8. 7. 1990, 1♀, A. Gogala leg., PMSL
 Škofi, VL07, 1. 6. 1991, 1♀1♂, A. Gogala leg., PMSL
 Kregolišče, VL07, 1. 6. 1991, 1♀, A. Gogala leg., PMSL
 Kastelec, VL14, 7. 6. 1994, 1♀, A. Gogala leg., PMSL
 Slavnik, VL14, 23. 6. 1991, 2♂, A. Gogala leg., PMSL
 Pokojišče, VL48, 19. 5. 1993, 1♂, A. Gogala leg., PMSL
 Obrov, VL24, 21. 5. 1993, 1♂, A. Gogala leg., PMSL
 Vonarje, WM41, 8. 6. 1996, 1♀, A. Gogala vid.
 Črni Vrh, Pasja ravan, VM40, 4. 7. 1996, 1♀, A. Gogala vid.
 Lož, Dane, Škrilje, VL56, 18. 5. 2019 on *Taraxacum*, 1♂, A. Gogala leg., PMSL

Andrena hesperia Smith, 1853*Andrena freya* Strand, 1915

Mediterranska vrsta. V submediteranskem, predalpskem, dinarskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Asteraceae Cichorioideae (lastna opazovanja). Univoltina, dejavna od aprila do junija. Mediterranean species. In the sub-Mediterranean, pre-Alpine, Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Asteraceae Cichorioideae (pers. obs.). Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 7. – 16. 5.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 15. 5. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Topolovec, VL03, 9. 5. 1991, 1♀, A. Gogala leg., PMSL
 Kregolišče, VL07, 2. 5. 1992, 1♀, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 9. 5. 1993, 1♀, A. Gogala leg., 24. 4. 1993, 2♂, A. Gogala leg., PMSL
 Mrzlica, 1100 m, WM01, 28. 5. 1991, 2♂, V. Furlan leg., PMSL
 Boč, WM42, 15. 5. 1994, 1♂, A. Gogala leg., PMSL
 Iški Vintgar, VL68, 6. 5. 1995, 1♂, A. Gogala leg., PMSL
 Lukovec, Rabotnica, VL07, 22. 4. 2006, 1♀, photo A. Gogala
 Brje pri Komnu, VL07, 7. 6. 1997 on *Hieracium*, 1♀, A. Gogala vid.



Slika / Figure 23: *Andrena fulvago* female on *Crepis*. Lukovica, Log, June 2008.



Slika / Figure 24: *Andrena hesperia* female digging her nest burrow. Lukovec, Rabotnica, Kras, April 2006.

Subgenus *Cnemidandrena* Hedicke, 1933***Andrena denticulata*** (Kirby, 1802)*Andrena listerella* (Kirby, 1802)

Evrosibirska vrsta. Široko razširjena v Sloveniji, ni je v submediteranskem območju. Oligolektična, specializirana za Asteraceae. Univoltina, dejavna od julija do septembra.

Eurosiberian species. Widely distributed in Slovenia, absent from the sub-Mediterranean region. Oligolectic, specialized on Asteraceae. Univoltine, active from July to September.

VOGRIN, 1955: Podčetrtek, 18. – 25. 8., 2. 9.; GOGALA, 1991, 1994, 1999; ZANDIGIACOMO & al., 2013: 110—Tolmin (coll.Gräffe)

Podčetrtek, WM41, 2. 9. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 30. 7. 1991, 1♀, A. Gogala leg., 15. 8. 1991, 1♂, A. Gogala leg., 11. 8. 1990, 1♀, A. Gogala leg., PMSL

Sp. Brnik, VM62, 10. 8. 1993, 1♀, A. Gogala leg., PMSL

Kobarid, Idrsko, UM92, 14. 8. 1993, 1♀, A. Gogala leg., PMSL

Nemški Rovt, VM22, 23. 7. 1994, 1♀, A. Gogala leg., PMSL

Gradišče pri Lukovici, VM71, 5. 9. 1996, 1♀, A. Gogala leg., PMSL

Ig, Draga, VL68, 13. 7. 1999, 1♀, A. Gogala leg., PMSL

Sorško polje, VM51, 4. 8. 1935, 1♀, M. Hafner leg., PMSL

Črnuče, Jarški prod, VM60, 9. 9. 2004 on *Tanacetum vulgare*, 1♀, photo A. Gogala

Iški Vintgar, VL68, 16. 7. 2009 on *Astrantia*, 1♀, photo A. Gogala

Stara Fužina, VM12, 20. 7. 1995, 1♀, A. Gogala vid.

Vonarje, WM41, 6. 8. 1996, 1♀, A. Gogala vid.

Podpeč, Jezero, VL59, 5. 8. 1997, 1♀, A. Gogala vid.

Kranj, Brdo, VM52, 12. 7. 2007, 1♀, A. Gogala vid.

Vrhnika, Star maln, VL49, 20. 8. 2010, 1♀, A. Gogala vid.

Andrena fuscipes (Kirby, 1802)*Andrena pubescens* (Kirby, 1802)

Evropska vrsta. V predalpskem in subpanonskem območju Slovenije. Oligolektična, specializirana za rod *Calluna* (Ericaceae). Univoltina, dejavna avgusta in septembra.

European species. In the pre-Alpine and sub-Pannonian regions of Slovenia. Oligolectic, specialized on *Calluna* (Ericaceae). Univoltine, active in August and September.

VOGRIN, 1955: Podčetrtek, 3. – 8. 9.; GOGALA, 1994, 1999

Podčetrtek, WM41, 9. 9. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 16. 8. 1992, 1♀1♂, A. Gogala leg., PMSL

Sp. Brnik, VM62, 10. 8. 1993, 1♂, A. Gogala leg., PMSL, 8. 9. 2004 on *Calluna vulgaris*, 1♀, photo A. Gogala

Kranj, Brdo, VM52, 31. 8. 2006, 1♀, A. Gogala vid.

Andrena nigriceps (Kirby, 1802)

Evropska vrsta. V Sloveniji je znan le en primerek z Nanosa (submediteransko območje). Polilektična vrsta. Univoltina, dejavna od junija do avgusta.

European species. In Slovenia only one specimen is known from Mt. Nanos (sub-Mediterranean region). Polylectic species. Univoltine, active from June to August.

GOGALA, 1994, 1999

Nanos: Sv. Hieronim, VL27, 25. 7. 1992, 1♀, A. Gogala leg., PMSL



Slika / Figure 25: *Andrena denticulata* female on *Astrantia*. Iški Vintgar, July 2009.



Slika / Figure 26: *Andrena fuscipes* female on *Calluna vulgaris*. Sp. Brnik, September 2004.



Slika / Figure 27: *Andrena nigriceps* female from Nanos, collected in July 1992.

Subgenus *Cryptandrena* Pittioni, 1948

Andrena ventricosa Dours, 1873

Severnomediteranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Polilektična vrsta. Bivoltina, dejavna od aprila do junija ter julija in avgusta.

North Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Polylectic species. Bivoltine, active from April to June and in July and August.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 5. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Brestovica, UL97, 2. 5. 1990, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 17. 7. 1991, 1♀, A. Gogala leg., PMSL

Gorjansko, UL97, 19. 7. 1992, 1♀, A. Gogala leg., PMSL

Gorjansko, Vale, UL97, 22. 5. 1994, 1♀, A. Gogala leg., PMSL

Padna, UL93, 23. 5. 1995, 1♀, A. Gogala leg., PMSL

Strunjan, UL94, 7. 5. 2009 on *Thymus*, 1♀, A. Gogala leg., PMSL

Koštabona, Škrline, VL03, 22. 4. 1994, 1♂, A. Gogala leg., PMSL

Dragonja, Stena, UL93, 17. 6. 1995, 1♀, A. Gogala vid.



Slika / Figure 28: *Andrena ventricosa* female on *Thymus*. Strunjan, Istria, May 2009.

Subgenus *Didonia* Gribodo, 1894*Andrena mucida* Kriechbaumer, 1873*Andrena julliani* Schmiedeknecht, 1883

Mediterranska vrsta. V submediteranskem območju Slovenije. Pomladna generacija zbira pelod na *Muscari* (Liliaceae), poletna na *Knautia* in *Scabiosa* (Dipsacaceae). Bivoltina, dejavna od marca do maja ter od junija do avgusta. Obstaja verjetnost, da pomladni in poletni primerki pripadajo dvema ločenima vrstama (SCHEUCHL & WILLNER, 2016). Na Vremščici sem primerke obeh generacij našel na istem kraju.

Mediterranean species. In the sub-Mediterranean region of Slovenia. Spring generation collects pollen of *Muscari* (Liliaceae), summer generation of *Knautia* and *Scabiosa* (Dipsacaceae). Bivoltine, active from March to May and from June to August. There is a possibility that the spring and summer specimens are two distinct species (SCHEUCHL & WILLNER, 2016). On Mt. Vremščica I found both at the same place.

GOGALA, 1994, 1999

Brje pri Komnu, VL07, 8. 4. 1996 on *Muscari botryoides*, 1♀, A. Gogala leg., lent to H. Zettel (Wien)

Dragonja, UL93, 22. 3. 1997, 1♀, A. Gogala leg., PMSL

Črni Kal, VL14, 13. 6. 1992, 1♂, A. Gogala leg., PMSL

Vremščica, VL26, 4. 7. 1992, 1♂, A. Gogala leg., 5. 7. 1999, 1♂, A. Gogala leg., PMSL, 14. 7. 2009

on *Knautia*, 1♀, photo A. Gogala, 23. 6. 2018 on *Knautia*, 2♂, A. Gogala vid., 930 m, 2. 5. 2019on *Muscari botryoides*, 1♀, A. Gogala leg., PMSLPivka, Jurišče, VL45, 6. 7. 2006 on *Knautia illyrica*, 1♂, photo A. Gogala, 1♀, A. Gogala vid.

Slika / Figure 29: *Andrena mucida* female on *Scabiosa*. Vremščica, July 2009.

Subgenus *Distandrena* Warncke, 1968

Andrena distinguenda Schenck, 1871

Meditranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Brassicaceae. Univoltina, dejavna od marca do junija.

Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Brassicaceae. Univoltine, active from March to June.

GOGALA, 1994, 1999

Podčetrtek, WM41, 11. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

M. Žablje, VL18, 23. 5. 1993 on *Brassica*, 2♀, A. Gogala leg., PMSL

Ustje, Uhanje, VL18, 28. 4. 1994, 1♀, A. Gogala leg., PMSL

Strunjan, UL94, 26. 5. 1994 on *Brassica*, 1♀, A. Gogala leg., 17. 4. 1995, 1♀2♂, A. Gogala leg., PMSL

Strunjan, Belvedere, UL94, 24. 3. 2001, 1♀, A. Gogala leg., PMSL



Slika / Figure 30: *Andrena distinguenda* female from Strunjan, Istria, collected in March 2001.

Subgenus *Euandrena* Hedicke, 1933***Andrena bicolor*** Fabricius, 1775*Andrena gwynana* (Kirby, 1802)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektna vrsta, a poletna generacija obiskuje predvsem Campanulaceae (lastna opazovanja). Bivoltina, dejavna od marca do maja ter od junija do avgusta.

West Palaearctic species, widely distributed in Slovenia. Polylectic species, but the summer generation visits mainly Campanulaceae (pers. obs.). Bivoltine, active from March to May and from June to August.

GRÄFFE, 1892: Lipica, 5.; VOGRIN, 1955: Podčetrtek, 4. 4., 1. 6., 1. – 10. 7.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 10. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Dolina Raše: Griže, VL16, 21. 3. 1992, 1♀ (GOGALA, 1994)

Brje pri Komnu, VL07, 24. 3. 1991, 1♀, A. Gogala leg., 22. 2. 1992, 1♂, A. Gogala leg., 31. 3. 1991, 1♂, A. Gogala leg., 17. 7. 1991, 1♂, A. Gogala leg., PMSL, 28. 3. 2004 on *Gagea*, 1♀, photo A. Gogala

Lj. barje: Plešivica, VL59, 2. 4. 1991, 1♀1♂, A. Gogala leg., PMSL

Preserje, Vrh, VL58, 7. 4. 1991, 1♀, A. Gogala leg., PMSL

Lipa, UL97, 10. 4. 1991, 1♀, A. Gogala leg., PMSL

Slavnik, VL14, 22. 5. 1991, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 9. 6. 1991, 1♀, A. Gogala leg., PMSL

Bloke: Volčje, Bloško jezero, VL67, 4. 8. 1991, 1♀, A. Gogala leg., PMSL

Bezovica, VL14, 28. 2. 1992, 1♂, A. Gogala leg., PMSL

Log, Lukovica, VL59, 4. 3. 1992, 1♂, A. Gogala leg., PMSL, 19. 6. 2004 on *Campanula patula*, 1♀, photo A. Gogala

Gradišče pri Lukovici, VM71, 5. 3. 1997, 1♂, A. Gogala leg., PMSL

Dragonja, UL93, 7. 3. 1997, 2♂, A. Gogala leg., PMSL

Paško jezero, VL46, 21. 3. 2000 on *Salix*, 1♂, A. Gogala leg., PMSL

Bohinj: Ukanc, VM02, 8. 7. 1992, 1♀, A. Gogala leg., PMSL

Vremščica, VL26, 9. 5. 1992, 1♀, A. Gogala leg., 25. 6. 1993, 1♀, A. Gogala leg., PMSL

Tublje pri Komnu, VL07, 17. 6. 1992, 1♀, A. Gogala leg., PMSL, 25. 2. 2017, 1♀, A. Gogala vid.

Polhov Gradec, VM40, 8. 4. 1992, 1♀, A. Gogala leg., PMSL

Ljubljana, Črnuče, VM60, 21. 3. 1993, 1♀, A. Gogala leg., PMSL

Črni Kal, VL14, 13. 6. 1992, 1♂, A. Gogala leg., PMSL

Hrastovlje, VL14, 13. 6. 1992, 1♂, A. Gogala leg., PMSL

Škocjan, VL25, 18. 4. 1992, 1♂, A. Gogala leg., PMSL

Nova Gorica, Solkan, UL99, 13. 3. 1993, 1♂, A. Gogala leg., PMSL

Pohorje: Rogla, WM24, 24. 7. 1993, 1♂, A. Gogala leg., PMSL

Sp. Pirniče, VM51, 10. 3. 1994 on *Salix*, 1♀, A. Gogala vid.

Iški Vintgar, VL68, 17. 3. 1994, 1♀1♂, A. Gogala vid.

Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♀1♂, A. Gogala vid.

Kočevje, Eleonorina jama, Strmec, VL85, 25. 6. 1994, 1♀, A. Gogala vid.

Radovna, VM24, 10. 8. 1994, 1♀, A. Gogala vid.

Obrež, Grabe, WM93, 22. 4. 1995, 1♀, A. Gogala vid.

Kamniška Bistrica, VM63, 7. 5. 1995, 1♂, A. Gogala vid.

Pl. Vogar, VM12, 9. 6. 1938, 1♀, M. Hafner leg., PMSL, 20. 7. 1996, 1♀1♂, A. Gogala vid.
 Ig, Draga, VL68, 14. 3. 1997, 1♂, A. Gogala vid.
 Kum, WM00, 11. 9. 1997 on *Leontodon*, 1♀, A. Gogala vid.
 Rakitna, VL58, 26. 5. 1998, 1♀, A. Gogala vid.
 Nanos: Sv. Hieronim – Pleša, 4. 7. 1998 on *Geranium*, 1♀, A. Gogala vid.
 Čaven: Kucelj, VL08, 25. 7. 1998, 1♀, A. Gogala vid.
 Lužarji, VL67, 1. 5. 1999 on *Thlaspi*, 1♀, A. Gogala vid.
 Planinsko polje: Grčarevec, VL48, 22. 3. 2000 on *Salix*, 1♀, A. Gogala vid.
 Planina, Planinsko polje, VL47, 22. 4. 2000, 1♀, A. Gogala vid.
 Snežnik, VL54, 3. 6. 2000, 1♀, A. Gogala vid.
 Topol, Jeterbenk, VM50, 23. 2. 2008 on *Helleborus niger*, 1♀, A. Gogala vid.
 Preserje, Ponikve, VL58, 13. 3. 2008, 1♀, A. Gogala vid., 22. 3. 2011 on *Isopyrum thalictroides*,
 1♀, photo A. Gogala, 15. 3. 2017, 1♀, A. Gogala vid.
 Brestovica, Gredina, UL97, 11. 3. 2012, 1♀ on *Galanthus*, A. Gogala vid.

Andrena chrysopus Pérez, 1903

Vzhodnomediterranska vrsta. V Sloveniji na Krasu (submediteransko območje). Oligolektična, specializirana za rod *Asparagus* (Asparagaceae). Njena hranilna rastlina na Krasu je *Asparagus officinalis*. Univoltina, dejavna maja in junija.

East Mediterranean species. In Slovenia in the Kras (sub-Mediterranean region). Oligolectic, specialized on *Asparagus* (Asparagaceae). Its foodplant in the Kras is *Asparagus officinalis*. Univoltine, active in May and June.

GOGALA, 2004, 2011; ZANDIGIACOMO & al. 2013: 109—Pirano (= Piran) (leg. Maidl)
 Tublje pri Komnu, VL07, 10. 5. 2003 on *Asparagus officinalis*, 1♀, A. Gogala leg., PMSL
 Lukovec, Rabotnica, VL07, 10. 5. 2009 on *Asparagus officinalis*, 1♀, photo A. Gogala

Andrena fulvida Schenck, 1853

Evropska vrsta. V Sloveniji v Črnučah pri Ljubljani (predalpsko območje), Iškem Vintgarju (dinarsko območje) in Podčetrtku (subpanonsko območje). Polilektična vrsta. Univoltina, dejavna maja in junija.

European species. In Slovenia at Črnuče near Ljubljana (pre-Alpine region), Iški Vintgar (Dinaric region) and Podčetrtek (sub-Pannonian region). Polylectic species. Univoltine, active in May and June.

GOGALA, 1994, 1999, 2018b
 Podčetrtek, WM41, 15. 5. 1932, 1♂, 14. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Ljubljana, Črnuče, VM60, 15. 6. 1993 on *Verbascum*, 3♀, A. Gogala leg., 6. 5. 1994, 1♀, A. Gogala leg., PMSL
 Iški Vintgar: Vrbica, VL68, 8. 6. 2010 on *Hemerocallis lilioasphodelus*, 1♀, A. Gogala leg., PMSL

Andrena ruficrus Nylander, 1848*Andrena rufitarsis* Zetterstedt, 1838

Evropska vrsta. Razširjena v alpskem in predalpskem območju Slovenije. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna od marca do maja.

European species. Distributed in the Alpine and pre-Alpine regions of Slovenia. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active from March to May.

GOGALA, 1994, 1999

Ljubljana, Črnuče, VM60, 7. 4. 1992, 2♀, A. Gogala leg., 19. 3. 1993, 1♀ 3♂, A. Gogala leg., 21. 3. 1993, 1♀, A. Gogala leg., PMSL, 9. 3. 1994 on *Salix*, 1♀, photo A. Gogala
Kamniška Bistrica, VM63, 31. 3. 1994, 1♀ 1♂, A. Gogala leg., PMSL

Andrena rufula Schmiedeknecht, 1883

Severnomediteranska vrsta. V submediteranskem območju Slovenije. Verjetno polilektična vrsta, ki obiskuje izključno drevesa in grmovnice. Sam sem jo opazoval na vrstah rodu *Prunus* (Rosaceae). Univoltina, dejavna od marca do maja.

North Mediterranean species. In the sub-Mediterranean region of Slovenia. Probably polylectic species, visiting exclusively trees and bushes. I observed a female on *Prunus* (Rosaceae) species. Univoltine, active from March to May.

GOGALA, 1991, 1994, 1999

Kras: Vale, UL97, 14. 4. 1991, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 12. 4. 1992, 1♀, A. Gogala leg., 11. 4. 1992, 1♂, A. Gogala leg., 12. 3. 1995, 2♂, A. Gogala leg., PMSL

Gorjansko, VL07, 6. 4. 2008 on *Prunus mahaleb*, 1♀, A. Gogala leg., PMSL

Gorjansko, UL97, 11. 4. 1992, 3♂, A. Gogala leg., PMSL

Škocjan, VL25, 18. 4. 1992, 1♂, A. Gogala leg., PMSL

Komen, Lipa, UL97, 22. 3. 2009 on *Buxus sempervirens*, 1♂, A. Gogala leg., PMSLHrastovlje, Zanigrad, VL14, 29. 3. 2008 on *Prunus mahaleb*, 1♀, photo A. GogalaŠkofi, VL07, 31. 3. 1997 on *Prunus*, 1♂, A. Gogala vid.

Brestovica, Grofova jama, UL97, 12. 4. 2009, 1♀, A. Gogala vid.

Andrena symphyti Schmiedeknecht, 1883

Severnomediteranska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za rod *Symphytum* (Boraginaceae). Univoltina, dejavna od aprila do junija.

North Mediterranean species, widely distributed in Slovenia. Oligolectic, specialized on *Symphytum* (Boraginaceae). Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 19. 4., 13. 5.; GOGALA, 1994, 1999

Podčetrtek, WM41, 1. 5. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Kregolišče, VL07, 2. 5. 1992, 1♀, A. Gogala leg., PMSL

Obrov, VL24, 21. 5. 1993, 1♀, A. Gogala leg., PMSL

Log, Lukovica, VL59, 4. 4. 1994, 1♀1♂, A. Gogala leg., 24. 4. 1992, 2♀, A. Gogala leg., PMSL
Koštabona, Škrline, VL03, 22. 4. 1994 on *Symphytum*, 1♀, A. Gogala leg., PMSL
Dobova, Mihalovec, WL58, 13. 5. 1994, 1♀, A. Gogala leg., PMSL
Stara Fužina, VM12, 25. 5. 1995, 1♀, A. Gogala leg., PMSL
Izvir Rižane, VL14, 17. 4. 1995, 1♂, A. Gogala leg., PMSL
Obrež, Grabe, WM94, 22. 4. 1995, 1♂, A. Gogala leg., PMSL
Borl, WM73, 22. 4. 1995, 1♂, A. Gogala leg., PMSL
Kum, WM00, 8. 5. 1998, 1♂, A. Gogala leg., PMSL
Kodreti, Dolanci, VL17, 2. 5. 2000, 1♂, A. Gogala leg., PMSL, 1♀, A. Gogala vid.
Čipnje, VL07, 23. 5. 1993, 1♀, A. Gogala leg., PMSL
Ustje, Uhanje, VL18, 6. 3. 1994, 1♀, A. Gogala leg., PMSL
Brje pri Komnu, VL07, 4. 5. 2008 on *Symphytum tuberosum*, 1♀, photo A. Gogala, 22. 4. 2018, 1♀
on *Symphytum tuberosum*, A. Gogala vid.
Planinsko polje: Laze, 445 m, 6. 5. 2009, 1♀, T. Faasen leg., coll. M. de Groot
Polhov Gradec, VM40, 29. 4. 1995, 1♀, A. Gogala vid.
Rakitna, VL58, 25. 5. 1996, 1♀, A. Gogala vid.

Andrena vulpecula Kriechbaumer, 1873

Severnomediteranska vrsta. Razširjena v submediteranskem, dinarskem, predalpskem in subpanonskem območju Slovenije. Oligolektična, specializirana za rod *Helianthemum* (Cistaceae). Univoltina, dejavna maja in junija.

North Mediterranean species. Distributed in the sub-Mediterranean, Dinaric, pre-Alpine and sub-Pannonian regions of Slovenia. Oligolectic, specialized on *Helianthemum* (Cistaceae). Univoltine, active in May and June.

GOGALA, 1994, 1999

Podčetrtek, WM41, 11. 5. 1936, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Movraž, VL13, 14. 6. 1991, 2♀, A. Gogala leg., PMSL
Brje pri Komnu, VL07, 10. 5. 1992, 1♀, A. Gogala leg., 2. 6. 1991, 1♂, A. Gogala leg., 29. 4. 1994, 1♂, A. Gogala leg., PMSL, 31. 5. 1992 on *Helianthemum*, 1♀, photo A. Gogala
Gorjansko, UL97, 17. 5. 1992, 2♀2♂, A. Gogala leg., PMSL
Kurešček, VL68, 6. 6. 1992, 1♀, A. Gogala leg., PMSL
Padna, UL93, 16. 5. 1995, 1♀, A. Gogala leg., PMSL
Podpeč, VL14, 23. 5. 1995, 1♀, A. Gogala leg., PMSL
Sela na Krasu, UL97, 30. 4. 1995, 1♂, A. Gogala leg., PMSL
Krvavi potok, Mihele, VL15, 17. 5. 1996, 1♂, A. Gogala leg., PMSL
Polhov Gradec, Grmada, VM40, 15. 5. 2008, 1♂, A. Gogala leg., PMSL
Brestovica, UL97, 2. 5. 1990, 1♀, A. Gogala leg., PMSL
Veliki Dol, VL07, 21. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala

Umaknjena s seznama / Omitted from the list:

Andrena montana Warncke, 1973

Gogala, 1991 je poročal o njej pomotoma (GOGALA, 1994). Podatki pripadajo vrsti *A. vulpecula*.
Erroneously reported by Gogala 1991 (GOGALA, 1994). Records refer to *A. vulpecula*.



Slika / Figure 31: *Andrena bicolor* female on *Gagea*. Brje pri Komnu, Kras, March 2004.



Slika / Figure 32: *Andrena chrysopus* female on *Asparagus officinalis*. Rabotnica, Lukovec, Kras, May 2009.



Slika / Figure 33: *Andrena fulvida* female on *Hemerocallis lilioasphodelus*. Iški Vintgar, Vrbitca, June 2010.



Slika / Figure 34: *Andrena ruficrus* female on *Salix*. Črnuče, Sava river, Ljubljana, March 1994.



Slika / Figure 35: *Andrena rufula* female on *Prunus mahaleb*. Zanigrad, Istra, March 2008.



Slika / Figure 36: *Andrena symphyti* female on *Symphytum tuberosum*. Brje pri Komnu, Kras, May 2008. As her tongue is too short to reach the nectar at the base of the flower from inside, she cuts a slit in the corolla tube (seen above the bee) with her mandibles and steals nectar from the outside.



Slika / Figure 37: *Andrena vulpecula* male on the nesting ground. Grmada, Polhograjsko hribovje, May 2008.

Subgenus *Graecandrena* Warncke, 1968

Andrena hyemala Warncke, 1973

Vzhodnomediterranska vrsta. V Sloveniji v submediteranskem (Kras) in dinarskem območju. Verjetno oligolektična, specializirana za Brassicaceae, čeprav poročajo tudi o drugih hranilnih rastlinah. Na Krasu sem jo našel na rodu *Alyssum*. Univoltina, dejavna od aprila do junija. *Andrena hyemala* je bila na Krasu v devetdesetih prejšnjega stoletja redno videvana na rodu *Alyssum*. Kasneje je povsem izginila, na rodu *Alyssum* jo je zamenjala vrsta *A. rugulosa*.

East Mediterranean species. In Slovenia in the sub-Mediterranean (Kras) and the Dinaric regions. Probably oligolectic, specialized on Brassicaceae, although other foodplants are also reported. In the Kras, it was found on *Alyssum*. Univoltine, active from April to June. *Andrena hyemala* was regularly seen on *Alyssum* in the Kras in the 1990s. Later it completely disappeared and was replaced on *Alyssum* by *A. rugulosa*.

GOGALA, 1991, 1994, 1999

Brje pri Komnu, VL07, 1. 6. 1991, 1♀, A. Gogala leg., 1. 5. 1991, 1♂, A. Gogala leg., 28. 4. 1994, 1♂, A. Gogala leg., PMSL

Gorjansko, UL97, 27. 4. 1992, 1♀, A. Gogala leg., PMSL

Kregolišče, VL07, 2. 5. 1992, 1♀ 1♂, A. Gogala leg., PMSL

Čipnje, VL07, 23. 5. 1993, 1♀, A. Gogala leg., PMSL

Ig, Škričlje, Stražar, 720 m, VL68, 28. 5. 1999, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 1. 5. 1991, 1♂, A. Gogala leg., PMSL

***Andrena impunctata* Pérez, 1895**

Mediterranska vrsta. V Sloveniji ob obali (submediteransko območje). Polilektična vrsta, obiskuje predvsem Brassicaceae in Apiaceae. Bivoltina, dejavna aprila in maja ter od junija do avgusta.

Mediterranean species. In Slovenia along the coast (sub-Mediterranean region). Polylectic species, visiting mainly Brassicaceae and Apiaceae. Bivoltine, active in April and May and from June to August.

GOGALA, 1999

Strunjan, UL94, 22. 6. 1994 on *Sinapis*, 1♀ 1♂, A. Gogala leg., PMSL

Debeli rtič, UL94, 16. 5. 1995, 2♀, A. Gogala leg., PMSL



Slika / Figure 38: *Andrena hyemala* female from Kregolišče, Kras, collected in May 1992.



Slika / Figure 39: *Andrena impunctata* female from Strunjan, Istria, collected in June 1994.

Subgenus *Holandrena* Pérez, 1890

Andrena decipiens Schenck, 1861

Mediterranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Polilektična vrsta (lastna opazovanja), obiskuje *Allium*, Apiaceae in Fabaceae. Univoltina, dejavna od junija do septembra.

O vrsti *A. flavilabris* so menili, da gre za pomladno generacijo bivoltine *A. decipiens*, a je samostojna vrsta po Manderyju, Kosuchu in Schubertu (MANDERY, KOSUCH & SCHUBERTH, 2008).

Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Polylectic species (pers. obs.), visiting *Allium*, Apiaceae and Fabaceae. Univoltine, active from June to September.

A. flavilabris was considered a spring generation of a bivoltine *A. decipiens*, but is a distinct species according to MANDERY, KOSUCH & SCHUBERTH, 2008.

GOGALA, 1999

Sočerga, Veli Badin, VL13, 3. 7. 1994 on *Allium*, 2♀, A. Gogala leg., PMSL, 15. 8. 2006 on *Eryngium amethystinum*, 1♀, photo A. Gogala

Strunjan, UL94, 22. 7. 1994, 1♀, A. Gogala leg., PMSL

Strunjan, Belvedere, UL94, 22. 6. 2011 on *Trifolium fragiferum*, 1♂, A. Gogala leg., PMSL

Dragonja, Stena, UL93, 13. 7. 1995, 1♀, A. Gogala leg., PMSL

Sečovelje, Fontanigge, UL93, 27. 7. 1998 on *Medicago*, 1♀, A. Gogala leg., 22. 7. 1997, 1♂, A. Gogala leg., PMSL

Lukovec, Golec, VL07, 5. 8. 2006 on *Eryngium amethystinum*, 1♀, photo A. Gogala

Andrena flavilabris Schenck, 1874

Mediterranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Polilektična vrsta (MANDERY, KOSUCH & SCHUBERTH, 2008). Univoltina, dejavna od aprila do junija. Samci, najdeni oktobra na Kraškem robu, so verjetno postali dejavni prezgodaj zaradi toplega vremena jeseni.

Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Polylectic species (MANDERY, KOSUCH & SCHUBERTH, 2008). Univoltine, active from April to June. Males that were found in October at the Karst edge probably emerged earlier due to the warm weather in the autumn.

VOGRIN, 1955: Podčetrtek, 12. 3.; GOGALA, 1991 (as *A. decipiens*), 1994 (as *A. decipiens*)

Podčetrtek, WM41, 25. 4. 1933, 1♂, E. Jaeger leg., PMSL

Sočerga, Veli Badin, VL13, 3. 10. 1990, 2♂, A. Gogala leg., PMSL

Strunjan, Belvedere, UL94, 24. 3. 2001, 1♂, A. Gogala leg., PMSL

Andrena labialis (Kirby, 1802)

Zahodnopalearktična vrsta. V submediteranskem, predalpskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Fabaceae. Verjetno komunska vrsta. Univoltina, dejavna od maja do julija.

West Palearctic species. In the sub-Mediterranean, pre-Alpine and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Fabaceae. Probably communal species. Univoltine, active from May to July.

VOGRIN, 1955: Podčetrtek, 28. 5., 5. – 16. 6., 7. 7.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 14. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Brje pri Komnu, VL07, 2. 6. 1991, 1♀, A. Gogala leg., 14. 7. 1991, 2♀, A. Gogala leg., 16. 5. 1992, 1♀1♂, A. Gogala leg., 10. 5. 1992, 1♂, A. Gogala leg., PMSL
 Slavnik, VL14, 23. 6. 1991, 1♀ 1♂, A. Gogala leg., PMSL
 Rakitovec, Kavčič, VL13, 26. 5. 2000, 1♀, A. Gogala leg., PMSL
 Movraž, VL13, 3. 6. 1992, 1♂, A. Gogala leg., PMSL
 Padna, UL93, 16. 5. 1995, 1♂, A. Gogala leg., PMSL
 Sečovlje, Fontanigge, UL93, 31. 5. 1997, 1♂, A. Gogala vid.
 Strunjan, Belvedere, UL94, 23. 5. 1998, 1♀ 1♂, A. Gogala vid., 22. 6. 2011 on *Trifolium fragiferum*, 1♀ 1♂, photo A. Gogala
 Dol pri Hrastniku, WM01, 6. 6. 1999, 1♂, A. Gogala vid.

Andrena variabilis Smith, 1853

Mediteranska vrsta. V Sloveniji le na Steni pri Dragonji (Istra, submediteransko območje). Polilektična vrsta. Bivoltina, dejavna maja in junija ter od avgusta do oktobra.

Mediterranean species. In Slovenia only at Stena near Dragonja (Istria, sub-Mediterranean region). Polylectic species. Bivoltine, active in May and June and from August to October.

GOGALA, 1994, 1999
 Dragonja, Stena, UL93, 4. 8. 1993 on *Eryngium amethystinum*, 1♀, A. Gogala leg., PMSL
 Dragonja, UL93, 2. 9. 1997, 1♀, A. Gogala leg., PMSL



Slika / Figure 40: *Andrena decipiens* female on *Eryngium amethystinum*. Veli Badin, Sočerga, Istria, August 2006.



Slika / Figure 41: *Andrena flavilabris*, face of the male from Strunjan, Istria, collected in March 2001.



Slika / Figure 42: *Andrena labialis* female from Brje pri Komnu, Kras, collected in May 1992.



Slika / Figure 43: *Andrena variabilis* female from Stena near Dragonja, Istria, collected in August 1993.

Subgenus *Hoplandrena* Pérez, 1890***Andrena bucephala* Stephens, 1846**

Evropska vrsta. V submediteranskem, predalpskem in subpanonskem območju Slovenije. Polilektrična vrsta, obiskuje predvsem drevesa in grmovnice. Komunska vrsta. Univoltina, dejavna aprila in maja.

European species. In the sub-Mediterranean, pre-Alpine and sub-Pannonian regions of Slovenia. Polylectic species, visiting mainly trees and bushes. Communal species. Univoltine, active in April and May.

VOGRIN, 1955: Podčetrtek, 23. 4., 15. 5.; GOGALA, 1994, 1999
Podčetrtek, WM41, 26. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Log, Lukovica, VL59, 8. 5. 1992, 1♀, A. Gogala leg., 4. 4. 1994, 2♂, A. Gogala leg., PMSL
Koštabona, Škrlina, VL03, 22. 4. 1994 on *Acer*, 1♀, A. Gogala leg., PMSL
Dobrova, VM50, 6. 5. 1994, 1♀, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 30. 5. 1996, 1♀, A. Gogala leg., PMSL
Kranj, Brdo, VM52, 8. 5. 2007, 1♀, A. Gogala leg., PMSL
Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala leg., PMSL

***Andrena carantonica* Pérez, 1902**

? *Apis sabulosa* Scopoli, 1763

Andrena scotica Perkins, 1916

Andrena jacobii Perkins, 1921

Andrena trimmerana auct.

Evropska vrsta, široko razširjena v Sloveniji. Polilektrična in komunska vrsta. Univoltina, dejavna od marca do junija.

European species, widely distributed in Slovenia. Polylectic and communal species. Univoltine, active from March to June.

SCOPOLI, 1763 (?), VOGGRIN, 1955: Podčetrtek, 26. – 29. 4., 25. 5.; GOGALA, 1991, 1994, 1999
Podčetrtek, WM41, 19. 4. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
Škofi, VL07, 1. 5. 1991, 1♀, A. Gogala leg., PMSL
Kregolišče, VL07, 19. 4. 1992, 1♀2♂, A. Gogala leg., PMSL
Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala leg., PMSL
Dobova, Mihalovec, WL58, 8. 6. 1994, 1♀, A. Gogala leg., PMSL
Pl. Vogar, VM12, 24. 5. 1996, 1♀, A. Gogala leg., PMSL
Trstelj, UL97, 10. 4. 1991, 1♂, A. Gogala leg., PMSL
Bohinj: Ukanc, VM02, 24. 4. 1994, 1♂, A. Gogala leg., PMSL
Obrež, Grabe, WM94, 22. 4. 1995, 1♂, A. Gogala leg., PMSL
Hrastovlje, VL14, 7. 3. 1998 on *Prunus spinosa*, 1♂, A. Gogala leg., PMSL
Log, Lukovica, VL59, 21. 4. 1998, 1♂, A. Gogala leg., 4. 4. 1994, 1♂, A. Gogala leg., PMSL
Sočerga, Veli Badin, VL13, 1. 4. 2001 on *Prunus mahaleb*, 1♂, A. Gogala leg., PMSL
Črni Vrh, Pasja ravan, VM40, 2. 6. 1993, 1♀, A. Gogala leg., PMSL
Kamniška Bistrica, VM63, 7. 5. 1995, 1♂, A. Gogala leg., PMSL
Gorjansko, VL07, 6. 4. 2008 on *Prunus mahaleb*, 1♀, A. Gogala leg., PMSL, ob meji, UL97, 2. 5. 2018, 1♀ on *Cotinus*, A. Gogala vid.

Brje pri Komnu, VL07, 31. 3. 1997 on *Taraxacum*, 1♀, A. Gogala vid.
 Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala vid.
 Komen, Lipa, UL97, 22. 3. 2009 on *Buxus sempervirens*, 1♂, photo A. Gogala
 Čaven, Kucelj, VL08, 19. 5. 2012, 1♀, A. Gogala vid.
 Tublje pri Komnu, VL07, 25. 3. 2017, 1♂ on *Prunus spinosa*, A. Gogala vid.

Andrena ferox Smith, 1847

Evropska vrsta. V submediteranskem, dinarskem in subpanonskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna od aprila do junija.

European species. In the sub-Mediterranean, Dinaric and sub-Pannonian regions of Slovenia. Polylectic species. Univoltine, active from April to June.

GOGALA, 1994, 1999

Podčetrtek, WM41, 16. 5. 1937, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Brje pri Komnu, VL07, 25. 4. 1993, 1♀, A. Gogala leg., 30. 4. 1995, 1♀, A. Gogala leg., PMSL
 Pokojišče, VL58, 19. 5. 1993, 1♀, A. Gogala leg., PMSL
 Podpeč, VL14, 1. 5. 1994, 1♀, A. Gogala leg., PMSL
 Veliki Dol, VL07, 31. 3. 1997, 1♂, A. Gogala leg., PMSL

Andrena nuptialis Pérez, 1902

Severnomediteranska vrsta. V Sloveniji na Kavčiču na Kraškem robu v Istri (submediteransko območje) in na Snežniku (dinarsko območje). Oligolektična, specializirana za Apiaceae. Univoltina, dejavna julija in avgusta. O pojavljanju pomladne generacije so poročali pomotoma (WESTRICH, 2018).

North Mediterranean species. In Slovenia on Mt. Kavčič at the Karst edge in Istria (sub-Mediterranean region) and Mt. Snežnik (Dinaric region). Oligolectic, specialized on Apiaceae. Univoltine, active in July and August. Presence of the spring generation was erroneously recorded (WESTRICH, 2018).

GOGALA, 2011

Rakitovec, Kavčič, 780 m, VL23, 29. 7. 2009 on *Eryngium amethystinum*, 1♀, A. Gogala leg., 13. 8. 2011, 1♂, A. Gogala leg., PMSL
 Snežnik, 1580 m, VL54, 19. 7. 2018 on Apiaceae, 1♀, A. Gogala leg., PMSL

Andrena rosae Panzer, 1801

Andrena austriaca auct.

Evrosibirska vrsta. V predalpskem, dinarskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Apiaceae. Univoltina, dejavna julija in avgusta. Po Reemerju in sod. (REEMER in sod. 2008) je bivoltina, z vrsto *A. stragulata* kot pomladno generacijo.

Eurosiberian species. In the pre-Alpine, Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Apiaceae. Univoltine, active in July and August. According to REEMER et al. (2008) bivoltine, *A. stragulata* being the spring generation.

Graeffe, 1902: dolina Soče, Trnovski gozd, 6. – 8.; GOGALA, 1994, 1999
 Podčetrtek, WM41, 9. 8. 1935, 1♀, 12. 7. 1934, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
 Gradišče pri Lukovici, VM71, 31. 7. 1996, 2♀, A. Gogala leg., PMSL
 Krško, Anovec, WL49, 1. 8. 1996, 1♀, A. Gogala leg., PMSL

Andrena spinigera (Kirby, 1802)

Andrena dragana Friese, 1887

Andrena trimmerana auct.

Palaearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina. V Sloveniji je dejavna marca in aprila, bolj zgodaj kot *A. carantonica*.

SCHMIDT in sod. (2015) niso našli genske razlike med vrstama *A. spinigera* in *A. trimmerana*, zato so zaključili, da pripadata isti vrsti, kot pomladna in poletna generacija. Vendar tesno sorodne vrste ni mogoče vedno ločiti po številnih črtnokodnega seznama, čeprav so taksonomsko priznane. Schmidt in sod. (2015) naštevajo več takih primerov. V Sloveniji poletne generacije nismo nikoli našli, čeprav pomladna ni bila redka. Samci vrst *A. spinigera* in *A. trimmerana* se tudi morfološko razlikujejo, zato obravnavam vrsto *A. spinigera* kot samostojno.

Palaearctic species, widely distributed in Slovenia. Polylectic species. Univoltine. In Slovenia active in March and April, earlier than *A. carantonica*.

SCHMIDT et al. (2015) did not find genetic difference between *A. spinigera* and *A. trimmerana*, and thus concluded that they are conspecific, representing spring and summer generations of the same species. But closely related species cannot always be separated by barcode index numbers, although they are taxonomically accepted. Schmidt et al. (2015) list several such cases. In Slovenia, summer generation has never been found, although spring generation has not been rare. Males of *A. spinigera* and *A. trimmerana* are also morphologically differentiated, so I treat *A. spinigera* as a distinct species.

GOGALA, 1994 (as *A. trimmerana*), 1999

Podčetrtek, WM41, 25. 4. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Gorjansko, UL97, 11. 4. 1992, 1♀, A. Gogala leg., 27. 4. 1992, 1♀, A. Gogala leg., PMSL

Log, Lukovica, VL59, 9. 4. 1993, 1♀, A. Gogala leg., 9. 3. 1992, 1♂, A. Gogala leg., 18. 3. 1993, 2♂, A. Gogala leg., PMSL

Štanjel, Čipnje, VL17, 6. 3. 1994 on *Salix*, 1♀1♂, A. Gogala leg., PMSL

Nova Gorica, Solkan, UL99, 13. 3. 1993, 1♂, A. Gogala leg., PMSL

Kamniška Bistrica, VM63, 31. 3. 1994, 1♂, A. Gogala leg., PMSL

Koštabona, Škrline, VL03, 24. 3. 1995, 1♂, A. Gogala leg., 5. 3. 1994 on *Salix*, 1♂, A. Gogala leg., PMSL

Dol pri Ljubljani, ob Savi, VM70, 14. 4. 2006, 1♂, A. Gogala leg., PMSL

Famlje, VL25, 18. 3. 1994 on *Prunus*, 1♀, A. Gogala vid.

Planinsko polje: Grčarevec, VL48, 28. 3. 1994, 1♀, A. Gogala vid.

Komen, Lipa, UL97, 20. 3. 2011 on *Buxus sempervirens*, 1♂, photo A. Gogala

***Andrena stragulata* Illiger, 1806**

Andrena eximia Smith, 1847

Evrosibirska vrsta. V predalpskem in subpanonskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna od marca do maja. Po Reemerju in sod. (REEMER in sod. 2008) je sinonim vrste *A. rosae*, ki je tako bivoltina.

Eurosiberian species. In the pre-Alpine and sub-Pannonian regions of Slovenia. Polylectic species. Univoltine, active from March to May. According to REEMER et al. (2008) synonym of *A. rosae*, which is thus bivoltine.

GOGALA, 1994, 1999

Podčetrtek, WM41, 13. 4. 1923, 1♂, 1. 4. 1929, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Bevke, VL49, 17. 4. 1996, 1♀, A. Gogala leg., PMSL

Štatenberg, WM53, 7. 4. 1994, 1♂, A. Gogala leg., PMSL

Borl, WM73, 22. 4. 1995, 1♂, A. Gogala leg., PMSL

Beričevo, VM70, 18. 4. 1996, 1♂, A. Gogala leg., PMSL



Slika / Figure 44: *Andrena bucephala* female from Pasja ravan, Polhograjsko hribovje, collected in May 1996.



Slika / Figure 45: *Andrena carantonica* female on *Prunus mahaleb*. Gorjansko, Kras, April 2008.



Slika / Figure 46: *Andrena ferox* female from Brje pri Komnu, Kras, collected in April 1995.



Slika / Figure 47: *Andrena nuptialis* female on *Eryngium amethystinum*. Kavčič, Rakitovec, Istria, July 2009.



Slika / Figure 48: *Andrena rosae* female from Gradišče pri Lukovici, collected in July 1996.



Slika / Figure 49: *Andrena spinigera* female from Gorjansko, Kras, collected in April 1992.



Slika / Figure 50: *Andrena stragulata* female from Bevke, Ljubljansko barje, collected in April 1996.

Subgenus *Larandrena* LaBerge, 1964*Andrena ventralis* Imhoff, 1832

Palearktična vrsta, široko razširjena v Sloveniji. Oligolektična vrsta, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna od marca do maja.

Kleptoparazit *Nomada alboguttata* Herrich-Schäffer, 1839 je bil najden na gnezdišču vrste *Andrena ventralis* ob reki Savi pri Senožeti (Dol pri Ljubljani) 19. aprila 2018.

Palaeartic species, widely distributed in Slovenia. Oligolectic species, specialized on *Salix* (Salicaceae). Univoltine, active from March to May. The kleptoparasite *Nomada alboguttata* Herrich-Schäffer, 1839 was found on the nesting ground of *Andrena ventralis* along the Sava river near Senožeti (Dol pri Ljubljani) on 19 April 2018.

GOGALA, 1994, 1999

Podčetrtek, WM41, 13. 4. 1931, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Sp. Pirniče, VM51, 10. 3. 1994 on *Salix*, 1♀ 1♂, A. Gogala leg., PMSL

Predgrad, Laze, WL03, 12. 3. 1994 on *Salix*, 2♀, A. Gogala leg., PMSL

Dobova, Mihalovec, WL58, 27. 3. 1994 on *Salix*, 1♀, A. Gogala leg., PMSL

Ustje, Uhanje, VL18, 28. 4. 1994, 1♀, A. Gogala leg., PMSL

Sp. Šturmovci, WM73, 20. 4. 1996 on *Salix*, 1♀, A. Gogala leg., PMSL

Dragonja, UL93, 22. 3. 1997, 1♀, A. Gogala leg., PMSL

Dol pri Ljubljani, ob Savi, VM70, 1. 4. 2006, 1♀4♂, A. Gogala leg., PMSL

Dobrova, VM50, 9. 3. 1994 on *Salix*, 3♂, A. Gogala leg., PMSL



Slika / Figure 51: *Andrena ventralis* female on the nesting ground. Senožeti, Dol pri Ljubljani, April 2008.

Famlje, VL25, 18. 3. 1994, 1♂, A. Gogala leg., PMSL
 Borl, WM73, 22. 4. 1995, 1♂, A. Gogala leg., PMSL
 Beričevo, VM70, 18. 4. 1996, 1♂, A. Gogala leg., PMSL
 Vinje pri Moravčah, VM71, 12. 3. 1997, 1♂, A. Gogala leg., PMSL
 Dol pri Ljubljani, Senožeti, VM80, 18. 3. 2009, 1♂, A. Gogala leg., PMSL, 16. 4. 2008, 1♀, photo
 A. Gogala, 23. 3. 2017, 1♀, A. Gogala leg., PMSL, 2♂ on *Salix*, A. Gogala vid.
 Polhov Gradec, VM40, 8. 4. 1992 on *Salix*, 1♂, A. Gogala leg., PMSL
 Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala vid.
 Ljubljana, Črnuče, VM60, 3. 4. 1997, 1♂, A. Gogala vid., Tomačevski prod, 25. 3. 2011, 1♂, A. Gogala vid.
 Velike Žablje, VL18, 16. 3. 2019 on *Salix*, 1♂, A. Gogala leg., PMSL

Subgenus *Lepidandrena* Hedicke, 1933

Andrena curvungula Thomson, 1870

Evropska vrsta. V submediteranskem, dinarskem in subpanonskem območju Slovenije. Oligolektična, specializirana za rodova *Campanula* in *Phyteuma* (Campanulaceae). Univoltina, dejavna od maja do julija.

European species. In the sub-Mediterranean, Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on *Campanula* and *Phyteuma* (Campanulaceae). Univoltine, active from May to July.

GOGALA, 1994, 1999; VAN DER SMISSEN 2010: 201—"Puzzole" (= Puče)
 Podčetrtek, WM41, 16. 7. 1928, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Vremščica, VL26, 4. 7. 1992, 1♀, A. Gogala leg., PMSL
 Rakitna, VL58, 30. 6. 1994, 1♀, A. Gogala leg., PMSL
 Hrpelje, Glavica, VL14, 9. 7. 1995, 1♀, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 22. 5. 1994, 1♂, A. Gogala leg., PMSL
 Slavnik, VL14, 9. 7. 1995, 1♂, A. Gogala leg., PMSL
 Ig, Škriplje, Stražar, 720 m, 9. 6. 1999, 1♂, A. Gogala leg., PMSL
 Rakitovec, Kavčič, VL23, 30. 6. 2006 on *Campanula*, 1♀, photo A. Gogala
 Ilirska Bistrica, V. Milanja, VL45, 28. 6. 2006 on *Phyteuma*, 1♀, A. Gogala vid.

Andrena dorsalis Brullé, 1832

Vzhodnomediterranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Polilektična vrsta (lastna opazovanja). Univoltina, dejavna od aprila do junija.

East Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Polylectic species (pers. obs.). Univoltine, active from April to June.

ALFKEN, 1932: 116—Podčetrtek (leg. Jaeger); VOGRIČ, 1955: Podčetrtek, 14. – 28. 4., 8. 5.;
 GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 26. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Brje pri Komnu, VL07, 14. 4. 1991, 1♀, A. Gogala leg., 2. 6. 1991, 2♀, A. Gogala leg., 11. 4. 1992,
 1♀ 1♂, A. Gogala leg., 31. 3. 1991, 1♂, A. Gogala leg., PMSL, 13. 4. 2008 on *Ranunculus*, 1♂,
 photo A. Gogala, 23. 4. 2017, 1♀ on *Ornithogalum*, A. Gogala leg., PMSL

Kregolišče, VL07, 26. 4. 1992, 1♂, A. Gogala leg., PMSL
 Osp, VL14, 22. 4. 1994, 1♂, A. Gogala leg., PMSL
 Veliki Dol, VL07, 31. 3. 1997, 1♂, A. Gogala leg., PMSL
 Tublje pri Komnu, VL07, 27. 4. 2008 on *Ornithogalum*, 1♀, photo A. Gogala

Andrena florivaga Eversmann, 1852

Vzhodnomediterranska vrsta. V submediteran-
 skem območju Slovenije. Polilektična vrsta, a
 na Krasu jo najpogosteje najdemo na ptičjem
 mleku (*Ornithogalum*, Asparagaceae). Univolt-
 ina, dejavna od aprila do junija.

East Mediterranean species. Distributed in the
 sub-Mediterranean region of Slovenia. Polylec-
 tic species, but in the Kras most frequently
 found on *Ornithogalum* (Asparagaceae). Uni-
 voltine, active from April to June.

GOGALA, 1991, 1994, 1999

Kregolišče, VL07, 2. 5. 1992, 1♀, A. Gogala leg., PMSL

Osp, VL14, 22. 4. 1994, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 1. 5. 1991, 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 12. 4. 1992, 1♂, A. Gogala leg., 13. 5. 1990, 1♀, A. Gogala leg., PMSL, 3.
 5. 1992, 1♀, photo A. Gogala

Veliki Dol, VL07, 27. 4. 2008 on *Ornithogalum kochii*, 1♀, photo A. Gogala

Hrastovlje, Zanigrad, VL14, 2. 4. 2011, 1♀ 2♂, 1♀ on *Potentilla tommasiniana*, photo A. Gogala,
 1♂, A. Gogala leg., PMSL

Rakitovec, Kavčič, VL23, 16. 4. 2011, 1♀ 1♂, A. Gogala vid.

Lukovec, Škratlevica, VL07, 30. 4. 2017, 1♀ on *Ornithogalum*, A. Gogala leg., PMSL

Andrena pandellei Pérez, 1895

Zahodnopalearktična vrsta, široko razširjena
 v Sloveniji. Oligolektična, specializirana za
 rod *Campanula* (Campanulaceae). Univoltina,
 dejavna od maja do julija.

West Palaearctic species, widely distribu-
 ted in Slovenia. Oligolectic, specialized on
Campanula (Campanulaceae). Univoltine,
 active from May to July.

VOGRIN, 1955: Podčetrtek, 22. 5.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 15. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Brje pri Komnu, VL07, 9. 6. 1991, 1♀, A. Gogala leg., 16. 6. 1991, 1♂, A. Gogala leg., PMSL

Log, Lukovica, VL59, 13. 5. 1992, 1♀, A. Gogala leg., 28. 5. 1991, 1♂, A. Gogala leg., PMSL

Padna, UL93, 16. 5. 1995, 1♀, A. Gogala leg., PMSL

Dragonja, Stena, UL93, 6. 5. 2000, 1♀, A. Gogala leg., PMSL

Sočerga, Veli Badin, VL13, 14. 6. 1991, 1♂, A. Gogala leg., PMSL

Črni Vrh, Pasja ravan, VM40, 2. 6. 1993, 1♂, A. Gogala leg., PMSL

Vipava, Gradišče, VL17, 2. 6. 1998, 1♂, T. Trilar leg., PMSL

Lukovec, VL07, 20. 5. 2007 on *Campanula rapunculus*, 1♀, photo A. Gogala

Preserje pod Krimom, Ponikve, VL58, 5. 5. 2011 on *Geranium sanguineum*, 1♂, A. Gogala leg.,
 PMSL

Zg. Gorjuše, 1000 m, VM23, 11. 7. 2019 on *Campanula rotundifolia*, 1♀, A. Gogala leg.

***Andrena paucisquama* Noskiewicz, 1924**

Pontska vrsta. V submediteranskem, predalpskem, preddinarskem in subpanonskem območju Slovenije. Polilektična vrsta, ki najraje obiskuje Campanulaceae in *Geranium* (Geraniaceae). Univoltina, dejavna maja in junija.

Pontic species. In the sub-Mediterranean, pre-Alpine, pre-Dinaric and sub-Pannonian regions of Slovenia. Polylectic species with preference for Campanulaceae and *Geranium* (Geraniaceae). Univoltine, active in May and June.

GOGALA, 1991, 1994, 1999

Podčetrtak, WM41, 25. 5. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 25. 5. 1991, 1♀, A. Gogala leg., 15. 5. 1990, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 9. 6. 1991, 1♀, A. Gogala leg., PMSL

Kregolišče, VL07, 9. 6. 1991, 1♀ 1♂, A. Gogala leg., PMSL

Bezovica, VL14, 14. 6. 1991, 1♀, A. Gogala leg., PMSL

Stari trg ob Kolpi, WL03, 26. 5. 1993, 1♀, A. Gogala leg., PMSL

Kastelec, VL14, 17. 6. 1995, 1♀, A. Gogala leg., PMSL

Črnotiče, Marija Snežna, VL14, 5. 6. 2004 on *Geranium sanguineum*, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 16. 5. 1993, 2♂, A. Gogala leg., PMSL

Preserje, Sv. Ana, VL59, 18. 5. 1999, 1♂, A. Gogala leg., PMSL

Slavnik, VL14, 23. 6. 1991, 1♀ 3♂, A. Gogala leg., PMSL

Movraž, VL13, 3. 6. 1992, 1♀, A. Gogala leg., PMSL

Veliki Dol, VL07, 21. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala

Sela na Krasu, UL97, 21. 5. 1997, 1♂, I. Bischoff leg., det. A. Gogala

Brestovica, UL97, 24. 5. 1997, 1♀, A. Gogala vid.

Umaknjena s seznama / Omitted from the list:

Andrena mocsaryi Schmiedeknecht, 1883

Westrich, 2010: Komen, on *Ornithogalum kochii*.

Napačna določitev. Dva primerka, ki ju je Paul Westrich ujel 22. maja 2002 za svojo zbirko, sta se kasneje izkazala za vrsto *Andrena dorsalis* (Westrich, osebna komunikacija).

Misidentification. The two specimens sampled by Paul Westrich on May 22, 2002 for his collection later turned out to be *Andrena dorsalis* (Westrich, pers. comm.).



Slika / Figure 52: *Andrena curvungula* female on *Campanula*. Kavčič, Rakitovec, Istria, June 2006.



Slika / Figure 53: *Andrena dorsalis* female on *Ornithogalum*. Tublje pri Komnu, Kras, April 2008.



Slika / Figure 54: *Andrena florivaga* female on *Ornithogalum kochii*. Veliki Dol, Kras, April 2008.



Slika / Figure 55: *Andrena pandellei* female on *Campanula rapunculus*. Lukovec, Kras, May 2007.



Slika / Figure 56: *Andrena paucisquama* female resting on *Geranium sanguineum*. Črnotiče, Marija Snežna, Podgorski kras, June 2004.

Subgenus *Leucandrena* Hedicke, 1933

Andrena argentata Smith, 1844

Evrosibirska vrsta. Le stara najdba v Studencu (preddinarsko območje) je poznana za Slovenijo. Polilektična vrsta. Bivoltina, dejavna aprila in maja ter od julija do septembra (SCHMID-EGGER & SCHEUCHL, 1997).

Eurosiberian species. Only an old record from Studenec (pre-Dinaric region) known for Slovenia. Polylectic species. Bivoltine, active in April and May and from July to September (SCHMID-EGGER & SCHEUCHL, 1997).

GOGALA, 1994, 1999

Krško, Studenec, WL29, 2. 7. 1933, 1♀1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Andrena barbilabris (Kirby, 1802)

Andrena sericea (Christ, 1791)

Andrena albicrus (Kirby, 1802)

Holarктиčna vrsta (EBMER, 2011). V predalpskem, dinarskem in subpanonskem območju Slovenije. Polilektična vrsta. Morda bivoltina z veliko redkejšo drugo generacijo (SCHMID-

Holarctic species (EBMER, 2011). In the pre-Alpine, Dinaric and sub-Pannonian regions of Slovenia. Polylectic species. Possibly bivoltine with much rarer second generation (SCHMID-

-EGGER & SCHEUCHL, 1997), ki bi bila lahko samostojna vrsta (VEGTER, 1994), a obstoj druge generacije je vprašljiv (WESTRICH, 2018). V Sloveniji se pojavlja le ena generacija na leto; dejavna je od aprila do junija.

Nomada alboguttata Herrich-Schäffer, 1839 je bila opazovana ob gnezdih vrste *Andrena barbilabris*, skopanih v peščena tla ob reki Iški v Iškem Vintgarju. Po letu 2014, ko je opazovano gnezdišče preplavila visoka voda, vrste *Andrena barbilabris* v Iškem Vintgarju nisem več videl.

-EGGER & SCHEUCHL, 1997), which could be a distinct species (VEGTER, 1994), but presence of the second generation is doubtful (WESTRICH, 2018). Only one generation a year is present in Slovenia, active from April to June.

Nomada alboguttata Herrich-Schäffer, 1839 was observed at the nests of *Andrena barbilabris* dug in sandy ground along the Iška river at Iški Vintgar. But since 2014, when the observed nest aggregation was overflowed by high water, *Andrena barbilabris* was no longer to be seen at Iški Vintgar.

GOGALA, 1994, 1999

Podčetrtek, WM41, 23. 5. 1923, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Ljubljana, Črnuče, VM60, 14. 6. 1994, 1♀, A. Gogala leg., PMSL

Iški Vintgar, VL68, 6. 5. 1995, 2♀ 3♂, A. Gogala leg., PMSL, 4. 5. 2006, 2♀ 1♂, photo A. Gogala,

24. 5. 2008, 1♀1♂, A. Gogala vid., 15. 4. 2011, 1♂, A. Gogala vid.

Bizeljsko, peskokop Župjek, WL59, 17. 5. 2000, 1♀, A. Gogala leg., PMSL

Snežnik, 1700 m, VL54, 25. 6. 2008 on *Salix*, 1♀, A. Gogala leg., PMSL, 30. 6. 2010 on *Salix*, 1♀,

A. Gogala vid., 1600 m, 28. 6. 2008, 1♀, A. Gogala leg., PMSL

Dobova, Mihalovec, WL58, 13. 5. 1994, 1♂, A. Gogala leg., PMSL

Dol pri Ljubljani, Kleče, VM70, 26. 5. 2006, 1♂, A. Gogala leg., PMSL



Slika / Figure 57: *Andrena barbilabris* female digging her nest burrow. Iški Vintgar, May 2006.

***Andrena parviceps* Kriechbaumer, 1873**

Severnomediteranska vrsta. Le podatek za Lipico (Kras, submediteransko območje) je poznan za Slovenijo. Polilektična vrsta, ki spomladi najpogosteje obiskuje vrbe (*Salix*). Bivoltina, dejavna aprila in maja ter julija (AMIET in sod., 2010).

North Mediterranean species. Only a record from Lipica (Kras, sub-Mediterranean region) is known for Slovenia. Polylectic species with preference for *Salix* in spring. Bivoltine, active in April and May and in July (AMIET et al., 2010).

Kriechbaumer, 1873: Lipica, 26. 4. 1871, 1♀

Subgenus *Margandrena* Warncke, 1968***Andrena marginata* Fabricius, 1776*****Andrena cetii* (SCHRANK, 1781)**

Evrosibirska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Dipsacaceae. Univoltina, dejavna avgusta in septembra.

Eurosiberian species, widely distributed in Slovenia. Oligolectic, specialized on Dipsacaceae. Univoltine, active in August and September.

LEBEDEV, 1931: 43—"Kamnik; Rimske Toplice"; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 24. 8. 1925, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 11. 8. 1990, 1♀, A. Gogala leg., 6. 9. 1995, 1♀, A. Gogala leg., 30. 7. 1991, 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 2. 9. 1990, 1♀ 1♂, A. Gogala leg., 19. 8. 1990, 1♂, A. Gogala leg., PMSL, 31. 8. 2008 on *Scabiosa*, 1♂, photo A. Gogala, 2. 9. 2018 on *Scabiosa*, 1♀, A. Gogala vid.

Padna, UL93, 23. 8. 1995, 1♀, A. Gogala leg., PMSL

Boršt, dolina Dragonje, VL03, 24. 9. 1999, 1♀, A. Gogala leg., PMSL

Soča, UM93, 14. 7. 1994, 1♂, A. Gogala leg., PMSL

Krim, Planinca, VL59, 14. 8. 2007 on *Scabiosa*, 1♀, photo A. Gogala

Gračišče, Butari, VL13, 19. 9. 1998, 1♀, A. Gogala vid.

Materija, Brezovica, VL24, 26. 8. 2000, 1♀, A. Gogala vid.

Sečovlje, Fontanigge, UL93, 19. 8. 2009 on *Scabiosa*, 1♀, A. Gogala vid.

Andrena pellucens Pérez, 1895

Severnomediteranska vrsta. V Sloveniji v submediteranskem, dinarskem in subpanonskem območju. Po K. in L. STANDFUSS (2010) oligolektična, specializirana za rodove *Colchicum*, *Smilax* in *Crocus* (Liliaceae, Iridaceae). Toda v Sloveniji zbira pelod le na rodovih *Leontodon* in *Crepis* (Asteraceae Cichorioideae), tudi če so na voljo cvetovi jesenskega podleska (*Colchicum*) (lastna opazovanja). Morfoloških razlik nismo našli. Univoltina, dejavna od avgusta do oktobra.

North Mediterranean species. In Slovenia in the sub-Mediterranean, Dinaric and sub-Pannonian regions. According to K. & L. STANDFUSS (2010) oligolectic, specialized on *Colchicum*, *Smilax* and *Crocus* (Liliaceae, Iridaceae). In Slovenia, however, the species collects pollen only from *Leontodon* and *Crepis* (Asteraceae Cichorioideae), even when *Colchicum* flowers are also present (pers. obs.). Morphological differences were not found. Univoltine, active from August to October.

GOGALA, 1991, 1994, 1999, 2011

Podčetrtek, WM41, 28. 8. 1937, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Brje pri Komnu, VL07, 29. 9. 1990, 1♀, A. Gogala leg., 7. 9. 1996, 2♀, A. Gogala leg., 13. 9. 1992, 1♂, A. Gogala leg., PMSL

Komen, Škrbina, VL07, 7. 9. 2008 on *Crepis*, 1♀, A. Gogala leg., PMSL

Preserje, Ponikve, VL58, 12. 9. 2008, 1♀, A. Gogala leg., PMSL, 15. 9. 2008 on *Cichorium*, 1♂, photo A. Gogala, 8. 10. 2008, 2♀, A. Gogala vid., 6. 9. 2011, 1♀1♂, A. Gogala vid., 8. 9. 2011, 1♀ on *Leontodon*, A. Gogala vid., 9. 9. 2011, 1♀2♂, A. Gogala leg., PMSL, 16. 9. 2011, 1♀ on *Leontodon*, A. Gogala vid., 21. 9. 2015, 1♀ on *Leontodon*, A. Gogala vid., 8. 9. 2016, 2♀ on *Leontodon*, 2♂, A. Gogala vid.



Slika / Figure 58: *Andrena marginata* female on *Scabiosa*. Planinca, Krim, August 2007.



Slika / Figure 59: *Andrena pellucens* female returning home with pollen load. Ponikve, Preserje pod Krimom, September 2008.

Subgenus *Melandrena* Pérez, 1890

Andrena albopunctata (Rossi, 1792)

Mediterranska vrsta. V submediteranskem območju Slovenije. Polilektična vrsta, opazovana na Apiaceae, *Allium* in *Limonium*. Univoltina, dejavna od junija do avgusta.

Mediterranean species. In the sub-Mediterranean region of Slovenia. Polylectic species, observed on Apiaceae, *Allium* and *Limonium*. Univoltine, active from June to August.

GOGALA & JENIČ, 2003

Sečovlje, Fontanigge, UL93, 16. 7. 1999 on *Limonium angustifolium*, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 8. 8. 2004 on Apiaceae, 1♀, photo A. Gogala

Gorjansko, VL07, 8. 8. 2004 on *Eryngium amethystinum*, 1♀, photo A. Gogala

Zazid, Lipnik, VL13, 9. 8. 2005, 1♀, A. Gogala vid.

Rakitovec, Kavčič, VL23, 17. 7. 2008 on *Allium sphaerocephalon*, 1♀, A. Gogala vid.

Strunjan, UL94, 7. 5. 2009 on *Thymus*, 1♀, A. Gogala vid.

Sočerga, Veli Badin, VL13, 27. 7. 2011, 1♀, A. Gogala vid.

Andrena barbareae* Panzer, 1805Apis atra* Scopoli, 1763, syn. nov.

Vrsto *Apis atra*, ki jo je Scopoli opisal leta 1763, so imeli za sinonim vrste *Andrena cineraria* (Linnaeus) (ROGENHOFER & DALLA TORRE, 1882, GUSENLEITNER & SCHWARZ, 2002). Scopoli jo je našel v Gorjušah med Bledom in Bohinjem leta 1761. Ker njegova zbirka ni ohranjena, njene identitete ne moremo preveriti neposredno. Toda Scopoli omenja več podatkov o nabranem primerku, več kot za katero drugo vrsto. Omenja celo rastlino, na katere cvetovih jo je našel, *Laserpitium latifolium* (Apiaceae). Ta rastlina cveti poleti (julija in avgusta), zato ne more biti gostiteljica vrst, ki so dejavne le spomladi, kot sta *Andrena cineraria* in *A. danuvia*. Edina bivoltina vrsta skupine *A. cineraria* v Evropi je *A. barbareae* s pomladno in poletno generacijo. Scopoli je tudi napisal, da so krila temna s prozornim korenem (*Alae fuscescentes, basi excolores*). Ta znak ustreza vrstama *A. barbareae* in *A. danuvia*, ne pa vrsti *A. cineraria*, ki ima temen le končni rob kril. Tipska lokaliteta, ki leži v Alpah, ustreza razširjenosti vrste *A. barbareae*, ki je v glavnem omejena na alpsko območje, z nekaj verjetnimi najdbami zunaj njega (SCHMID-EGGER in SCHEUCHL, 1997). Je polilektična in bivoltina, dejavna aprila in maja ter julija in avgusta. V Švici jo je mogoče najti do višine 2000 m (AMIET et al., 2010).

Apis atra Scopoli, 1763 je starejši sinonim vrste *Andrena barbareae* Panzer, 1805, a glede na International Code of Zoological Nomenclature (člen 23.9) je treba ohraniti prevladujočo rabo, ko starejši sinonim ni bil uporabljan kot veljavno ime po letu 1899 in je bil mlajši sinonim v rabi za določen takson kot njegovo predvidoma veljavno ime v vsaj 25 delih, ki jih je objavilo vsaj deset avtorjev v preteklih 50 letih v vsaj 10-letnem obdobju.

Apis atra, described by Scopoli (1763), was interpreted as a synonym of *Andrena cineraria* (Linnaeus) (ROGENHOFER & DALLA TORRE, 1882, GUSENLEITNER & SCHWARZ, 2002). Scopoli found it at Gorjuše between Bled and Bohinj in 1761. As his collection has not been preserved, we cannot check its identity directly. But Scopoli mentioned several data for the collected specimen, more than for any other. He even mentioned the plant on the flowers of which it was found, i.e. *Laserpitium latifolium* (Apiaceae). This plant blooms in the summer (July and August), so it cannot be a host of a species active only in spring like *Andrena cineraria* or *A. danuvia*. The only bivoltine species of the *A. cineraria* group in Europe is *A. barbareae* with the spring and summer generations. Scopoli also wrote that the wings are dark with a translucent base (*Alae fuscescentes, basi excolores*). This character state suits *A. barbareae* and *A. danuvia*, but not *A. cineraria* which has only dark apical border of the wings. The type locality, situated in the Alps, corresponds well with the distribution of *A. barbareae*, which is mostly limited to the Alpine region, probably with some records outside it (SCHMID-EGGER & SCHEUCHL, 1997). It is polylectic and bivoltine, active in April and May and in July and August. In Switzerland it can be found up to 2,000 m a.s.l. (AMIET et al., 2010).

Apis atra Scopoli, 1763 is a senior synonym of *Andrena barbareae* Panzer, 1805, but according to the International Code of Zoological Nomenclature (Article 23.9), when the senior synonym has not been used as a valid name after 1899 and the junior synonym has been used for a particular taxon as its presumed valid name, in at least 25 works, published by at least 10 authors in the immediately preceding 50 years and encompassing a span of not less than 10 years, the prevailing usage must be maintained.

Scopoli, 1763: Gorjuše, 1761, on *Laserpitium latifolium* (In Gariusche, inter Veldes & Vochein, capta An. 1761, super flores *Laserpitii latifolii*)

***Andrena danuvia* E. Stoeckert, 1950**

Vzhodnomediterranska vrsta. V subpanonskem in submediteranskem območju Slovenije. Polilektrična vrsta. Univoltina, dejavna od marca do maja.

Andrena danuvia je bila opisana z Dunaja, kjer je zelo številčna, gnezdi pod drevesi ob avenijah (FRABERGER, 2005). Vendar so jo dolgo imeli za sinonim vrste *A. cineraria*. Ima temno končno polovico prednjih kril, medtem ko ima *A. cineraria* temen le končni rob. Ta znak je podoben pri vrsti *A. barbareae*, a ta vrsta ima veliko krajši tretji člen tipalk. Pri vrsti *A. danuvia* je skoraj trikrat tako dolg kot širok, medtem ko je pri vrsti *A. barbareae* manj kot dvakrat tako dolg kot širok (PITTIONI & STÖCKHERT, 1950). Vrsto *A. danuvia* opredelujeta tudi očitnejši modri lesk zadka in manj očitni črni pas na oprsju.

East Mediterranean species. In the sub-Pannonian and sub-Mediterranean regions of Slovenia. Polylectic species. Univoltine, active from March to May.

Andrena danuvia was described from Vienna where it is very numerous, nesting under trees along the avenues (FRABERGER, 2005). However, it was treated as a synonym of *A. cineraria* for a long time. It has a dark apical half of the front wings, while *A. cineraria* has only a dark apical border. This character is similar in *A. barbareae*, but this species has much shorter third antennal segment. In *A. danuvia* it is almost three times as long as wide, while it is less than twice as long as wide in *A. barbareae* (PITTIONI & STÖCKHERT, 1950). *A. danuvia* is also characterized by more evident blue lustre of the abdomen and less evident black stripe on the thorax.

GOGALA, 2018a

Podčetrtek, WM41, 23. 4. 1932, 1♀, 27. 4. 1932, 1♂, 12. 5. 1932, 1♀, 10. 4. 1933, 2♀ 2♂, 28. 4. 1934, 1♀, E. Jaeger leg., PMSL

Podčetrtek, TRO - Olimlje, Trobevnik, 20. 5. 1933, 1♀, E. Jaeger leg., PMSL

Sela na Krasu, Kremenjak, UL97, 1. 5. 2018 on *Cotinus coggygria*, 1♀, A. Gogala leg., PMSL

***Andrena limata* Smith, 1853**

Andrena pectoralis Schmiedeknecht, 1883

Mediterranska vrsta. V alpskem in subpanonskem območju Slovenije. Polilektrična vrsta. Bivoltina, dejavna od aprila do junija ter avgusta in septembra.

Mediterranean species. In the Alpine and sub-Pannonian regions of Slovenia. Polylectic species. Bivoltine, active from April to June and in August and September.

GOGALA, 1994, 1999

Podčetrtek, WM41, 9. 8. 1935, 1♂, 11. 8. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Dobova, Mihalovec, WL58, 13. 5. 1994 on *Brassica*, 1♀, A. Gogala leg., PMSL

Obrež, Grabe, WM94, 22. 4. 1995, 1♀, A. Gogala leg., PMSL

Pl. Vogar, VM12, 7. 7. 1995, 1♀, A. Gogala leg., PMSL

Benica, XM15, 4. 8. 1995, 1♀, A. Gogala leg., PMSL

Stara Fužina, VM12, 20. 7. 1995, 1♀, A. Gogala vid.

Andrena morio Brullé, 1832

Mediterranska vrsta. V Sloveniji na Kraški planoti (submediteransko območje). Polilektična vrsta. Bivoltina, dejavna maja in junija ter od julija do septembra. V Sloveniji je poznana le pomladna generacija.

Mediterranean species. In Slovenia on the Kras plateau (sub-Mediterranean region). Polylectic species. Bivoltine, active in May and June and from July to September. In Slovenia only spring generation is known.

MOCSÁRY, 1897,: 92—"Kapornak" (= Krplivnik); GOGALA, 2012; ZANDIGIACOMO & al., 2013: 119—"Divača Sežana"

Lukovec, Poljska gora, VL07, 29. 5. 2011 on *Ruta divaricata*, *Jurinea mollis*, 1♀, A. Gogala leg., PMSL, 29. 6. 2013 on *Ruta*, 1♀, A. Gogala vid., 19. 5. 2018, 1♀ on *Ruta*, A. Gogala vid.

Lukovec, Golec, VL07, 28. 5. 2016, 1♀ on *Jurinea mollis*, A. Gogala vid.

Andrena nigroaenea (Kirby, 1802)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Verjetno komunska vrsta. Univoltina, dejavna od aprila do julija.

West Palaearctic species, widely distributed in Slovenia. Polylectic species. Probably communal species. Univoltine, active from April to July.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 20. 5. 1933, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Brje pri Komnu, VL07, 18. 5. 1991, 1♀, A. Gogala leg., 29. 4. 1994, 1♂, A. Gogala leg., PMSL

Kregolišče, VL07, 1. 6. 1991, 1♀, A. Gogala leg., PMSL

Rakitovec, VL13, 3. 6. 1992, 1♀, A. Gogala leg., PMSL

Rakitna, VL58, 11. 6. 1993, 1♀, A. Gogala leg., PMSL

Čezsoča, UM83, 2. 6. 1994, 1♀, A. Gogala leg., PMSL

Slavnik, VL14, 23. 6. 1991, 1♂, A. Gogala leg., PMSL, 9. 7. 1995, 1♀, A. Gogala vid.

Log, Lukovica, VL59, 13. 5. 1992, 1♂, A. Gogala leg., PMSL

Gaberje, Koboli, VL17, 1. 5. 1995, 1♂, A. Gogala leg., PMSL

Črni Vrh, Smolnik, VM40, 30. 5. 1996, 1♂, A. Gogala leg., PMSL

Rakitovec, Kavčič, VL13, 28. 4. 2001, 1♂, A. Gogala leg., PMSL

Vremščica, VL26, 4. 7. 1992, 1♀, A. Gogala leg., PMSL

Padna, UL93, 16. 5. 1995, 1♀, A. Gogala leg., PMSL

Sela na Krasu, UL97, 17. 5. 1998, 1♂, A. Gogala leg., PMSL

Kobjeglava, VL07, 31. 5. 2008 on *Reseda*, 1♀, photo A. Gogala

Brestovica, UL97, 24. 5. 1997, 1♀, A. Gogala vid.

Tublje pri Komnu, VL07, 11. 5. 2008 on *Cotinus*, 1♀, A. Gogala vid.

Setnica, Grmada, VM40, 6. 6. 2009, 1♀, A. Gogala vid.

Lukovec, Poljska gora, VL07, 28. 4. 2018, 1♀, A. Gogala vid.

Gorjuše, Kranjska dolina, 1080 m, VM23, 6. 6. 2019 on *Biscutella*, 1♀, A. Gogala leg., PMSL

Andrena nitida (Müller, 1776)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina, dejavna od marca do junija.

West Palaearctic species, widely distributed in Slovenia. Polylectic species. Univoltine, active from March to June.

- VOGRIN, 1955: Podčetrtek, 10. – 28. 4., Kalobje, 20. 4., Jaeger leg.; GOGALA, 1991, 1994, 1999
 Preserje, Vrh, VL58, 7. 4. 1991, 1♀ (GOGALA, 1991)
 Podčetrtek, WM41, 19. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Radovna, VM24, 1. 6. 1993, 1♀ (GOGALA, 1994)
 Pokojišče, VL48, 19. 5. 1993, 1♀ (GOGALA, 1994)
 Brje pri Komnu, VL07, 12. 4. 1992, 1♀, A. Gogala leg., PMSL
 Škocjan, VL25, 18. 4. 1992, 1♀1♂, A. Gogala leg., PMSL
 Ljubljana, Črnuče, VM60, 23. 4. 1993, 1♀, A. Gogala leg., PMSL
 Iška, VL68, 17. 3. 1994, 1♀, A. Gogala leg., PMSL
 Dragonja, UL93, 22. 3. 1997, 1♀, A. Gogala leg., PMSL
 Gorjansko, UL97, 11. 4. 1992, 2♂, A. Gogala leg., 15. 3. 1992, 1♀, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 27. 4. 1995, 1♂, A. Gogala leg., PMSL
 Vonarje, WM41, 9. 4. 1997, 1♂, A. Gogala leg., PMSL
 Sočerga, Veli Badin, VL13, 1. 4. 2001, 1♂ on *Prunus mahaleb*, A. Gogala leg., PMSL
 Kurešček, VL68, 6. 6. 1992, 1♀, A. Gogala leg., PMSL
 Obrov, Golac, 640 m, VL24, 10. 6. 1999, 1♀, S. Brelih leg., PMSL
 Kanal, Ročinj, UM90, 13. 3. 1993, 1♂, A. Gogala leg., PMSL
 Lj. barje: Plešivica, VL59, 2. 4. 1991, 1♂, A. Gogala leg., PMSL
 Vel. Račna, Radensko polje, VL78, 9. 4. 2006, 1♂, A. Gogala leg., PMSL, 22. 3. 2019, 1♀ on *Salix*,
 A. Gogala vid.
 Unec, Planinsko polje, VL47, 5. 4. 2007, 1♂ on *Salix*, A. Gogala leg., PMSL
 Divača, Dane, VL25, 12. 4. 2008, 1♀ on *Crepis*, photo A. Gogala
 Harije, Mola, VL34, 4. 4. 1994, 1♂, S. Polak leg., det. A. Gogala
 Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♀ on *Salix*, A. Gogala vid.
 Kamniška Bistrica, VM63, 31. 3. 1994, 1♀, A. Gogala vid.
 Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala vid.
 Dobrnič, VL98, 7. 5. 1994, 1♀, A. Gogala vid.
 Melinci, WM95, 9. 4. 1995, 1♀ on *Brassica*, A. Gogala vid.
 Pokljuka: Mrzli studenec, VM23, 24. 5. 1996, 1♀, A. Gogala vid.
 Planinsko polje: Laze, VL47, 15. 3. 1997, 1♀, A. Gogala vid.
 Kum, Ključevica, WM00, 8. 5. 1998, 1♀ on *Prunus*, A. Gogala vid.
 Pivka, Vel. Drskovško jezero, VL45, 25. 4. 2009, 1♀, A. Gogala vid., 29. 4. 2010, 1♀, A. Gogala
 vid.
 Čaven, Kucelj, VL08, 19. 5. 2012, 1♀, A. Gogala vid.
 Podpeč, Jezero, VL59, 18. 4. 2018, 1♀ on *Haquetia*, A. Gogala vid.
 Vipava, Budanje, VL18, 23. 3. 2019, 1♀ on *Taraxacum*, A. Gogala vid.

***Andrena thoracica* (Fabricius, 1775)**

Palearktična vrsta. V submediteranskem in alpskem (Stol) območju Slovenije. Polilektična vrsta. Bivoltina, dejavna od marca do junija in od julija do septembra.

Palearctic species. In the sub-Mediterranean and Alpine (Mt. Stol) regions of Slovenia. Polylectic species. Bivoltine, active from March to June and from July to September.

GOGALA, 1994, 1999

Stol, 1600 m, VM34, 28. 7. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Sočerga, Veli Badin, VL13, 3. 7. 1994, 2♀, A. Gogala leg., 20. 7. 2004 on *Allium*, 1♀, A. Gogala leg., PMSL

Dragonja, UL93, 22. 3. 1997 on *Taraxacum*, 1♀, A. Gogala leg., 7. 3. 1997, 2♂, A. Gogala leg., PMSL

Strunjan, UL94, 31. 3. 2000, 1♀, A. Gogala vid.

Hrastovlje, VL14, 2. 4. 2011 on *Prunus spinosa*, 1♂, photo A. Gogala

***Andrena vaga* Panzer, 1799**

Andrena ovina Klug, 1810

Evrosibirska vrsta. Široko razširjena v Sloveniji, verjetno je ni v alpskem območju. Oligolektična, specializirana za rod *Salix* (Salicaceae). Univoltina, dejavna od marca do maja.

Od leta 2006 spremljam veliko gnezdišče v Kremenici pri Igu. Naselbina vrste *Andrena vaga* na pobočju s peščeno zemljo, obrnjenem proti jugovzhodu, si deli zemljišče z enako veliko naselbino vrste *Colletes cunicularius*, ki se ji dejavnost začne in konča nekaj dni prej v letu. Vsako leto so čebele na gnezdišču številčne, čeprav se število čebel, videnih na vrbah, spreminja med leti. To lahko pomeni, da je razpoložljivost dobrih tal za gnezdenje odločilen dejavnik za preživetje čebeljih vrst. *Nomada lathburiana* (KIRBY, 1802), kleptoparazit v gnezdih vrste *Andrena vaga*, je bil prav tako številčen vsako leto.

Eurosiberian species. Widely distributed in Slovenia, probably absent from the Alpine region. Oligolectic, specialized on *Salix* (Salicaceae). Univoltine, active from March to May.

From 2006 onwards I have been monitoring a large nest aggregation at Kremenica near Ig. A colony of *Andrena vaga* on a slope with sandy soil oriented south-eastwardly is sharing the ground with equally large colony of *Colletes cunicularius*, which begins and ends its activities some days earlier in a year. Every year bees are numerous on the nest aggregation, although the number of bees seen on willows fluctuates from year to year. This may mean that the availability of good nesting grounds is a determining factor for the survival of bee species. *Nomada lathburiana* (KIRBY, 1802), a kleptoparasite in the nests of *Andrena vaga* is also numerous every year.

GRAEFFE, 1902: Tolmin, 4.; GOGALA, 1994, 1999

Podčetrtek, WM41, 13. 4. 1931, 1♂, 28. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Ljubljana, Črnuče, VM60, 21. 3. 1993, 1♀, A. Gogala leg., PMSL, Jarški prod, 14. 3. 2007, 1♀, A.

Gogala vid., Tomačevski prod, 25. 3. 2011, 1♀, A. Gogala vid., 19. 4. 2013, 1♀, A. Gogala vid.

Sp. Pirniče, VM51, 10. 3. 1994 on *Salix*, 1♀ 1♂, A. Gogala leg., PMSL

Kostel, Fara, VL93, 12. 3. 1994 on *Salix*, 1♀, A. Gogala leg., PMSL

Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala leg., PMSL
 Iška, VL68, 17. 3. 1994, 1♂, A. Gogala leg., PMSL
 Beričevo, VM70, 18. 4. 1996, 1♂, A. Gogala leg., PMSL
 Planinsko polje: Laze, VL47, 15. 3. 1997 on *Salix*, 1♂, A. Gogala leg., PMSL
 Dol pri Ljubljani, ob Savi, VM70, 1. 4. 2006, 1♂, A. Gogala leg., PMSL, 14. 4. 2006, 1♀, A. Gogala vid.
 Ig, Kremenica, VL68, 11. 4. 2007, 1♀, A. Gogala leg., PMSL, 12. 4. 2006, 1♀, photo A. Gogala, 20. 4. 2007, 1♀, photo A. Gogala, 17. 3. 2009, 1♀1♂, photo A. Gogala, 22. 3. 2011, 1♀ 1♂, A. Gogala vid., 13. 3. 2012, 1♀ 1♂, A. Gogala vid., 16. 4. 2013, A. Gogala vid., 3. 2016, 2♂, A. Gogala vid., 16. 3. 2017, 1♀1♂, A. Gogala vid., 6. 4. 2018, 1♀, A. Gogala vid., 2. 4. 2019, 1♀, A. Gogala vid.
 Bizeljsko, peskokop Župjek, WL59, 21. 4. 2000, 1♀, A. Gogala leg., PMSL
 Sp. Šturmovci, WM73, 20. 4. 1996 on *Salix*, 1♀ 1♂, A. Gogala vid.
 Vel. Račna, Radensko polje, VL78, 23. 3. 2012, 1♀, A. Gogala vid.

Umaknjena s seznama / Omitted from the list:

Andrena cineraria (Linnaeus, 1758)

VOGRIN, 1955: Podčetrtek, 20. 5.; GOGALA, 1994: Podčetrtek, WM41, 1999

Primerki v Jaegrovi zbirki, zbrani v Podčetrtku, pripadajo tesno sorodni vrsti *Andrena danuvia* Stoeckhert, 1950 (GOGALA, 2018).

Specimens in the Jaeger collection, collected at Podčetrtek, belong to the closely related *Andrena danuvia* Stoeckhert, 1950 (GOGALA, 2018).



Slika / Figure 60: *Andrena albopunctata* female on *Eryngium amethystinum*. Gorjansko, Kras, August 2004.



Slika / Figure 61: *Andrena danuvia* female from Olimje (Trobevnik) near Podčetrtek, collected in May 1933.



Slika / Figure 62: *Andrena limata* female from Pl. Vogar, Bohinj, collected in July 1995.



Slika / Figure 63: *Andrena morio* female on *Ruta divaricata*. Lukovec, Kras, May 2011.



Slika / Figure 64: *Andrena nigroaenea* female on *Reseda*. Kobjeglava, Kras, May 2008.



Slika / Figure 65: *Andrena nitida* female on *Crepis*. Dane pri Divači, Kras, April 2008.



Slika / Figure 66: *Andrena thoracica* female from Dragonja, Istria, collected in March 1997.



Slika / Figure 67: *Andrena vaga* female returning to her burrow with pollen load. Ig. Kremenica, April 2006.

Subgenus *Micrandrena* Ashmead, 1899

Andrena alfkenella Perkins, 1914

Zahodnopalearktična vrsta, razširjena v subpanonskem, submediteranskem in predalpskem območju Slovenije. Polilektrična vrsta. Bivoltina, dejavna maja in junija ter julija in avgusta.

West Palearctic species, distributed in the sub-Pannonian, sub-Mediterranean and pre-Alpine regions of Slovenia. Polylectic species. Bivoltine, active in May and June and in July and August.

LEBEDEV, 1931: 42; GOGALA, 1994, 1999; ZANDIGIACOMO & al., 2013: 107—Tolmino (= Tolmin) (coll.Gräffe)

Podčetrtek, WM41, 30. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Koštabona, Škrline, VL03, 29. 6. 1993, 1♀, A. Gogala leg., PMSL

Dobrova, VM50, 6. 5. 1994, 2♀, A. Gogala leg., PMSL

Obrež, Grabe, WM94, 29. 6. 1995, 1♀, A. Gogala leg., PMSL

Divača, VL16, 19. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala

Andrena falsifica Perkins, 1915

Evropska vrsta, široko razširjena v Sloveniji. Polilektična vrsta, ki najraje obiskuje rod *Potentilla* (Rosaceae). Univoltina, dejavna od aprila do junija.

European species, widely distributed in Slovenia. Polylectic species with a preference for *Potentilla* (Rosaceae). Univoltine, active from April to June.

LEBEDEV, 1931: 42—Rateče; VOGRIN, 1955: Podčetrtek, 16. 5.; GOGALA, 1991, 1994, 1999
Podčetrtek, WM41, 12. 6. 1935, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Lipa, UL97, 10. 4. 1991, 1♀, A. Gogala leg., PMSL
Kregolišče, VL07, 2. 5. 1992, 1♀, A. Gogala leg., PMSL
Kurešček, VL68, 6. 6. 1992, 1♀, A. Gogala leg., PMSL
Ljubljana, Črnuče, VM60, 23. 4. 1993, 1♀, A. Gogala leg., 3. 4. 1997, 1♀, A. Gogala leg., 13. 4. 1995, 1♂, A. Gogala leg., PMSL
Ljubljana, Črnuče, Jarški prod, VM60, 10. 4. 2009 on *Potentilla*, 1♀, A. Gogala leg., PMSL
Obrov, VL24, 21. 5. 1993, 1♀, A. Gogala leg., PMSL
Rakitna, VL58, 11. 6. 1993, 1♀, A. Gogala leg., PMSL
Brje pri Komnu, VL07, 24. 3. 1991, 2♂, A. Gogala leg., 31. 3. 1991, 2♂, A. Gogala leg., PMSL
Komen, Vale, UL97, 2. 4. 1995, 1♂, A. Gogala leg., PMSL
Pl. Vogar, VM12, 10. 6. 1938, 1♀, M. Hafner leg., PMSL
Gaberje, Koboli, VL17, 28. 5. 1995, 1♀, A. Gogala vid.
Veliki Dol, VL07, 31. 3. 1997 on *Prunus mahaleb*, 1♀ 1♂, A. Gogala vid.

Andrena floricola Eversmann, 1852

Zahodnopalearktična vrsta. V subpanonskem, preddinarskem in submediteranskem območju Slovenije. Verjetno oligolektična, specializirana za Brassicaceae. Bivoltina, dejavna aprila in maja ter julija in avgusta.

West Palaearctic species. In the sub-Pannonian, pre-Dinaric and sub-Mediterranean regions of Slovenia. Probably oligolectic, specialized on Brassicaceae. Bivoltine, active in April and May and in July and August.

GRÄFFE, 1895: Piran; GOGALA, 1999
Štatenberg, WM53, 7. 4. 1994, 1♀, A. Gogala leg., PMSL
Kostanjevica, WL37, 13. 5. 1994, 1♀, A. Gogala leg., PMSL

Andrena minutula (Kirby, 1802)

Andrena parvula (Kirby, 1802)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Bivoltina, dejavna od marca do maja ter od junija do avgusta.

West Palaearctic species, widely distributed in Slovenia. Polylectic species. Bivoltine, active from March to May and from June to August.

VOGRIN, 1955: Podčetrtek, 4. – 13. 4., 10. 5.; GOGALA, 1991, 1994, 1999
Podčetrtek, WM41, 26. 4. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Veliki Dol, VL07, 22. 3. 1992, 1♀, A. Gogala leg., PMSL

Škocjan, VL25, 18. 4. 1992, 1♀, A. Gogala leg., PMSL
 Cerkniško jezero: Dol. Jezero, VL56, 25. 4. 1992, 1♀, A. Gogala leg., PMSL
 Nanos: Sv. Hieronim, VL27, 25. 7. 1992, 1♀, A. Gogala leg., PMSL
 Ljubljana, Črnuče, VM60, 21. 3. 1993, 1♀, A. Gogala leg., 23. 6. 1993, 1♂, A. Gogala leg., PMSL
 Ljubljana, Črnuče, Jarški prod, VM60, 3. 7. 2009 on *Apiaceae*, 1♀, A. Gogala leg., PMSL
 Koštabona, Škrline, VL03, 24. 3. 1995, 1♀, A. Gogala leg., PMSL
 Dragonja, UL93, 17. 4. 1995, 1♀, A. Gogala leg., PMSL
 Gradišče pri Lukovici, VM71, 31. 7. 1996, 1♀, A. Gogala leg., PMSL
 Palško jezero, VL46, 21. 3. 2000 on *Salix*, 1♀, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 1. 4. 1991, 2♂, A. Gogala leg., 9. 3. 1992, 1♂, A. Gogala leg., 16. 6. 1996, 1♂,
 A. Gogala leg., 26. 7. 1990, 1♀, A. Gogala leg., PMSL
 Črni Kal, VL14, 13. 3. 1991, 1♂, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 15. 3. 1992, 1♂, A. Gogala leg., 24. 3. 1991, 1♂, A. Gogala leg., PMSL
 Sela na Krasu, UL97, 11. 3. 1995, 1♂, A. Gogala leg., PMSL
 Vinje pri Moravčah, VM71, 12. 3. 1997, 1♂, A. Gogala leg., PMSL
 Polhograjsko hribovje: Setnica, Grmada, VM40, 2. 7. 1999, 1♂, A. Gogala leg., PMSL
 Preserje, Vrh, VL58, 7. 4. 1991, 1♀, A. Gogala leg., PMSL
 Preserje, Ponikve, VL58, 7. 4. 1991, 1♀, A. Gogala leg., PMSL
 Dolsko, Križevska vas, VM70, 1. 4. 2006, 1♀, A. Gogala leg., PMSL
 Kum, WM00, 8. 5. 1998, 1♂, A. Gogala leg., PMSL
 Ljubljana, Golovec: Orle, VL69, 13. 3. 1991, 1♂, V. Furlan leg., PMSL
 Kranj, Brdo, VM52, 14. 6. 2007, 1♂, A. Gogala leg., PMSL
 Dobrova, VM50, 1. 4. 1995, 1♀, A. Gogala vid.
 Komen, Vale, UL97, 2. 4. 1995, 1♀, A. Gogala vid.
 Beričevo, VM70, 18. 4. 1996, 1♀, A. Gogala vid.
 Sp. Šturmovci, WM73, 20. 4. 1996 on *Salix*, 1♀, A. Gogala vid.
 Ig, Draga, VL68, 14. 3. 1997, 1♀, A. Gogala vid.
 Planinsko polje: Laze, VL47, 15. 3. 1997 on *Salix*, 1♀, A. Gogala vid.
 Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala vid.

***Andrena minutuloides* Perkins, 1914**

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Bivoltina, dejavna aprila in maja ter od junija do avgusta. West Palearctic species, widely distributed in Slovenia. Polylectic species. Bivoltine, active in April and May and from June to August.

VOGRIN, 1955: Podčetrtek, 12. 4., 11. 6.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 25. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Log, Lukovica, VL59, 29. 5. 1991, 1♀, A. Gogala leg., 7. 7. 1991, 1♂, A. Gogala leg., 30. 7. 1991,
 1♂, A. Gogala leg., PMSL
 Kozina, VL15, 22. 6. 1991, 1♀, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 14. 7. 1991, 1♀, A. Gogala leg., PMSL
 Čipnje, VL07, 23. 5. 1993, 1♀, A. Gogala leg., PMSL
 Sp. Pirniče, VM51, 8. 6. 1995, 1♀, A. Gogala leg., PMSL
 Slavnik, VL14, 9. 7. 1995, 1♀, A. Gogala leg., PMSL
 Stara Fužina, VM12, 24. 5. 1996, 1♀, A. Gogala leg., PMSL
 Črnuče, Jarški prod, VM60, 2. 6. 1998, 1♀, A. Gogala leg., PMSL

Zaplana, VL39, 23. 7. 1999, 1♀, A. Gogala leg., PMSL
Kregolišče, VL07, 10. 7. 1993, 1♂, A. Gogala leg., PMSL
Pl. Vogar, VM12, 9. 6. 1938, 1♀, M. Hafner leg., PMSL

Andrena nana (Kirby, 1802)

Zahodnopalearktična vrsta. V predalpskem in subpanonskem območju Slovenije. Polilektična vrsta. Bivoltina, dejavna od aprila do junija ter julija in avgusta.

West Palaearctic species. In the pre-Alpine and sub-Pannonian regions of Slovenia. Polylectic species. Bivoltine, active from April to June and in July and August.

GOGALA, 1991, 1994, 1999; ZANDIGIACOMO & al., 2013: 119—Tolmein (= Tolmin)
Podčetrtek, WM41, 11. 5. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Log, Lukovica, VL59, 25. 4. 1991, 1♀, A. Gogala leg., 24. 7. 1991, 1♀, A. Gogala leg., 1. 5. 1993, 1♂, A. Gogala leg., PMSL
Dobrova, VM50, 6. 5. 1994, 1♀, A. Gogala leg., PMSL
Obrež, Grabe, WM94, 22. 4. 1995, 1♀, A. Gogala leg., PMSL
Bizeljsko, peskokop Župjek, WL59, 17. 5. 2000, 1♀, A. Gogala leg., PMSL
Ljubljana, Črnuče, Jarški prod, VM60, 6. 7. 2009 on *Daucus carota*, 1♀, A. Gogala leg., PMSL
Moravče, Drtija, peskokop, VM81, 25. 4. 2018 on *Barbarea*, 1♀, A. Gogala leg., PMSL

Andrena nanula Nylander, 1848

Evrosibirska vrsta. V Sloveniji znana le podatka za Podčetrtek (subpanonsko območje) in Tolmin. Polilektična vrsta (SCHMID-EGGER IN SCHEUCHL, 1997), znane hranilne rastline so Apiaceae (AMIET in sod., 2010). Univoltina, dejavna julija in avgusta.

Eurosiberian species. In Slovenia only records from Podčetrtek (sub-Pannonian region) and Tolmin are at hand. Polylectic species (SCHMID-EGGER & SCHEUCHL, 1997), its known food-plants are Apiaceae (AMIET et al., 2010). Univoltine, active in July and August.

GOGALA, 1994, 1999; ZANDIGIACOMO & al., 2013: 119—Tolmino (= Tolmin) (coll. Graeffe)
Podčetrtek, WM41, 14. 8. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Andrena niveata Friese, 1887

Severnomediteranska vrsta. V Sloveniji v submediteranskem območju. Oligolektična, specializirana za Brassicaceae. Univoltina, dejavna maja in junija.

North Mediterranean species. In Slovenia in the sub-Mediterranean region. Oligolectic, specialized on Brassicaceae. Univoltine, active in May and June.

GOGALA, 1994, 1999
Brje pri Komnu, VL07, 10. 5. 1992, 1♀, A. Gogala leg., 1. 5. 1991, 1♂, A. Gogala leg., 18. 5. 1991, 1♂, A. Gogala leg., 2. 5. 1992, 3♂, A. Gogala leg., 10. 5. 1992, 1♂, A. Gogala leg., 7. 5. 2005, 1♂, A. Gogala leg., PMSL
Movraž, VL13, 3. 6. 1992, 1♀, A. Gogala leg., PMSL

Brestovica, UL97, 22. 5. 1994, 1♀, A. Gogala leg., PMSL
 Osp, VL14, 22. 4. 1994, 1♂, A. Gogala leg., PMSL
 Gaberje, Koboli, VL17, 28. 5. 1995, 1♀, A. Gogala vid.

Andrena rugulosa Stoeckhert, 1935

Severnomediteranska vrsta. V submediteranskem območju Slovenije. Polilektična vrsta. Opazoval sem jo na rodu *Alyssum* (Brassicaceae). Univoltina, dejavna aprila in maja.

North Mediterranean species. In the sub-Mediterranean region of Slovenia. Polylectic species. I observed it on *Alyssum* (Brassicaceae). Univoltine, active in April and May.

GOGALA, 1999; WESTRICH, 2010: Komen.

Podpeč, VL14, 23. 5. 1995, 1♀, A. Gogala leg., PMSL

Sočerga, Veli Badin, VL13, 12. 4. 1997 on *Alyssum*, 1♀ 1♂, A. Gogala leg., PMSL

Kras: Škofi, VL07, 22. 4. 2007 on *Alyssum montanum*, 1♀, A. Gogala leg., PMSL

Škocjan, Betanja, VL25, 18. 4. 1992, 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 17. 4. 2011 on *Alyssum montanum*, 1♀, A. Gogala leg., PMSL

Andrena saxonica Stoeckhert, 1935

Andrena krasensis Gogala, 1991

Severnomediteranska vrsta. V Sloveniji v submediteranskem območju. Oligolektična, specializirana za rod *Ornithogalum* (Asparagaceae). Univoltina, dejavna od aprila do junija.

North Mediterranean species. In Slovenia in the sub-Mediterranean region. Oligolectic, specialized on *Ornithogalum* (Asparagaceae). Univoltine, active from April to June.

GOGALA, 1991 (as *A. krasensis*), 1994, 1999; WESTRICH, 2010: Komen, on *Ornithogalum kochii*.

Kregolišče, VL07, 9. 6. 1991, 1♀, A. Gogala leg. (Holotypus *A. krasensis*), 26. 4. 1992, 1♀, A.

Gogala leg., 2. 5. 1992, 2♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 2. 5. 1992 on *Ornithogalum kochii*, 2♀, A. Gogala leg., PMSL

Sočerga, Veli Badin, VL13, 12. 4. 1997 on *Ornithogalum*, 1♀, A. Gogala leg., PMSL

Gorjansko, UL97, 17. 5. 1996 on *Ornithogalum*, 2♂, A. Gogala leg., PMSL

Divača, VL16, 19. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala

Andrena semilaevis Pérez, 1903

Andrena saundersella Perkins, 1914

Evropska vrsta. V Sloveniji v alpskem območju in na gorah Kum (predalpsko) in Nanos (submediteransko območje). Polilektična vrsta. Univoltina, dejavna od maja do julija.

European species. In Slovenia in the Alpine region and in the mountains of Kum (pre-Alpine) and Nanos (sub-Mediterranean region). Polylectic species. Univoltine, active from May to July.

GOGALA, 1999

Kum, WM00, 26. 7. 1996, 1♀, A. Gogala leg., PMSL

Nanos: Sv. Hieronim – Pleša, VL27, 4. 7. 1998, 1♀, A. Gogala leg., PMSL

Radovna, VM24, 1. 6. 1993, 1♂, A. Gogala leg., PMSL

Andrena simontornyella Noskiewicz, 1939

Mediterranska vrsta. V Sloveniji v submediteranskem območju in z osamljeno najdbo v predalpskem območju. Polilektična vrsta. Verjetno univoltina, dejavna od marca do junija. Po Schmid-Eggerju in Scheuchlu (SCHMID-EGGER & SCHEUCH, 1997) bivoltina, a druga generacija ni bila najdena v Sloveniji.

Mediterranean species. In Slovenia in the sub-Mediterranean region with a sole record in the pre-Alpine region. Polylectic species. Probably univoltine, active from March to June. According to SCHMID-EGGER & SCHEUCHL, 1997 bivoltine, but second generation has not been recorded in Slovenia.

GOGALA, 1991, 1994, 1999

Brje pri Komnu, VL07, 24. 3. 1991, 1♀, A. Gogala leg., 2. 5. 1992, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 1. 5. 1991, 1♀, A. Gogala leg., PMSL

Kregolišče, VL07, 1. 6. 1991, 2♀, A. Gogala leg., 31. 3. 1997, 1♂, A. Gogala leg., PMSL

Debeli rtič, UL94, 16. 5. 1995, 1♀, A. Gogala leg., PMSL

Strunjan, UL94, 17. 4. 1995, 1♂, A. Gogala leg., PMSL

Padna, UL93, 17. 4. 1995, 1♂, A. Gogala leg., PMSL

Vrhnika, Storžev hrib, 326 m, 3. 5. 2009, 1♀, T. Faasen leg., coll. M. de Groot

Sela na Krasu, UL97, 18. 6. 1995, 1♀, A. Gogala vid.

Andrena stromella Stoeckhert, 1928

Evropska vrsta. V subpanonskem, predalpskem in dinarskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna od marca do junija.

European species. In the sub-Pannonian, pre-Alpine, Alpine and Dinaric regions of Slovenia. Polylectic species. Univoltine, active from March to June.

VOGRIN, 1955: Podčetrtek, 5. 5., 7.; GOGALA, 1994, 1999

Podčetrtek, WM41, 11. 5. 1937, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Kamniška Bistrica, VM63, 7. 5. 1995, 1♀, A. Gogala leg., PMSL

Log, Lukovica, VL59, 21. 4. 1998, 1♀, A. Gogala leg., PMSL

Dolsko, Križevska vas, VM70, 1. 4. 2006, 1♀, A. Gogala leg., PMSL

Iška, VL68, 17. 3. 1994, 1♂, A. Gogala leg., PMSL

Borl, WM73, 22. 4. 1995, 2♂, A. Gogala leg., PMSL

***Andrena subopaca* Nylander, 1848**

Palearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Bivoltina, dejavna od marca do junija ter julija z zelo redko poletno generacijo (SCHMID-EGGER & SCHEUCHL, 1997), ki je v Sloveniji sicer nismo našli.

Palaearctic species, widely distributed in Slovenia. Polylectic species. Bivoltine, active from March to June and in July with very rare summer generation (SCHMID-EGGER & SCHEUCHL, 1997) that has not been recorded in Slovenia.

VOGRIN, 1955: Podčetrtek, 9. – 28. 4., 12. – 14. 5., 1. – 9. 6.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 14. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Topolovec, VL03, 9. 5. 1991, 1♀, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 29. 6. 1991, 1♀, A. Gogala leg., 25. 4. 1991, 1♀1♂, A. Gogala leg., 14. 5. 1991, 1♂, A. Gogala leg., 14. 6. 1990, 1♀, A. Gogala leg., 16. 4. 1991, 1♀, A. Gogala leg., PMSL
 Rakitna, VL58, 11. 6. 1993, 1♀, A. Gogala leg., PMSL
 Boč, WM42, 15. 5. 1994, 1♀, A. Gogala leg., PMSL
 Sp. Pirniče, VM51, 8. 6. 1995, 3♀, A. Gogala leg., PMSL
 Črnuče, Jarški prod, VM60, 2. 6. 1998, 1♀, A. Gogala leg., PMSL
 Rakov Škocjan, VL47, 6. 6. 1998, 1♀, A. Gogala leg., PMSL
 Mrzlica, 1100 m, WM01, 28. 5. 1991, 1♂, V. Furlan leg., 12. 6. 2019 on *Laserpitium siler*, 2♀, A. Gogala leg., PMSL
 Predgrad, Laze, WL03, 12. 3. 1994, 1♂, A. Gogala leg., PMSL
 Dragomer, VL59, 29. 3. 1997, 1♂, A. Gogala leg., PMSL
 Planinsko polje: Laze, VL47, 22. 4. 2004, 1♀, A. Gogala leg., PMSL
 Planina, Jakovica, VL47, 22. 4. 1994, 1♀, S. Polak leg., det. A. Gogala
 Veliki Dol, VL07, 21. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala
 Kostanjevica na Krki, WL37, 13. 5. 1994, 1♀, A. Gogala vid.
 Kočevje, Eleonorina jama, Strmec, VL85, 25. 6. 1994, 1♀, A. Gogala vid.
 Črni Vrh, VM40, 29. 4. 1995, 1♀, A. Gogala vid.
 Iški Vintgar, VL68, 6. 5. 1995, 1♀1♂, A. Gogala vid.
 Gradišče pri Lukovici, VM71, 12. 6. 1996, 1♀, A. Gogala vid.
 Vinje pri Moravčah, VM71, 3. 4. 1997, 1♂, A. Gogala vid.
 Vonarje, WM41, 9. 4. 1997, 1♀ 1♂, A. Gogala vid.
 Snežnik, VL54, 3. 6. 2000, 1♀, A. Gogala vid.

Umaknjena s seznama / Omitted from the list:

***Andrena curtula* Pérez, 1903**

GOGALA, 1999: napačna določitev / misidentification (GOGALA, 2003).



Slika / Figure 68: *Andrena alfkenella* female from Dobrova, collected in May 1994.



Slika / Figure 69: *Andrena falsifica* female on *Potentilla*. Jarški prod, Črnuče, April 2009.



Slika / Figure 70: *Andrena floricola* female from Štatenberg, collected in April 1994.



Slika / Figure 71: *Andrena minutula* female on an Apiaceae species. Jarški prod, Črnuče, Ljubljana, July 2009.



Slika / Figure 72: *Andrena minutuloides* female from Jarški prod, Črnuče, collected in June 1998.



Slika / Figure 73: *Andrena nana* female on *Daucus carota*. Jarški prod, Črnuče, Ljubljana, July 2009.



Slika / Figure 74: *Andrena niveata* female from Brje pri Komnu, Kras, collected in May 1992.



Slika / Figure 75: *Andrena rugulosa* female on *Alyssum montanum*. Brje pri Komnu, Kras, April 2011.



Slika / Figure 76: *Andrena saxonica*, face of a female.



Slika / Figure 77: *Andrena semilaevis* female from Kum, collected in July 1996.



Slika / Figure 78: *Andrena simontornyella*, face of a female.



Slika / Figure 79: *Andrena strohmei* female from Lukovica, Log, collected in April 1998.



Slika / Figure 80: *Andrena subopaca* female from Jarški prod, Črnuče, collected in June 1998.

Subgenus *Notandrena* Pérez, 1890

Andrena chrysoceles (Kirby, 1802)

Evropska vrsta. V dinarskem in predalpskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna od aprila do junija.

European species. In the Dinaric and pre-Alpine regions of Slovenia. Polylectic species. Univoltine, active from April to June.

GOGALA, 1994, 1999; ZANDIGIACOMO & al., 2013: 109—Pirano (= Piran) (coll.Gräffe)

Log, Lukovica, VL59, 1. 5. 1993, 1♀, A. Gogala leg., 13. 5. 1992, 1♂, A. Gogala leg., PMSL

Rakitna, VL58, 11. 6. 1993, 1♀, A. Gogala leg., PMSL

Cerknica, Dol. Jezero, VL56, 9. 5. 1995, 1♀1♂, A. Gogala leg., PMSL

Rakov Škocjan, VL47, 6. 6. 1998, 1♀1♂, A. Gogala leg., PMSL

Planina, Planinsko polje, VL47, 27. 4. 2001, 1♀, A. Gogala leg., 14. 5. 2009 on *Barbarea*, 1♀, A.

Gogala leg., 22. 4. 2000, 1♂, A. Gogala leg., PMSL

Koritnice, VL45, 30. 4. 1994, 1♂, S. Polak leg., det. A. Gogala

Krka, Gradiček, VL88, 11. 6. 2019 on Apiaceae, 1♀, A. Gogala leg., PMSL

Andrena curvana* Warncke, 1965Andrena gascheti* auct.

Vzhodnomediterranska vrsta. V submediteranskem, predalpskem in subpanonskem območju Slovenije. Verjetno oligolektična, specializirana za Apiaceae (lastna opazovanja). Univoltina, dejavna od junija do avgusta.

East Mediterranean species. In the sub-Mediterranean, pre-Alpine and sub-Pannonian regions of Slovenia. Probably oligolectic, specialized on Apiaceae (pers. obs.). Univoltine, active from June to August.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 20. 6. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Brje pri Komnu, VL07, 14. 7. 1991, 2♀, A. Gogala leg., 1. 8. 1991, 1♀, A. Gogala leg., PMSL

Log, Lukovica, VL59, 20. 7. 1991, 1♂, A. Gogala leg., PMSL

Gorjansko, UL97, 26. 6. 1993, 1♂, A. Gogala leg., PMSL

***Andrena fulvicornis* Schenck, 1853**

Evropska vrsta. V predalpskem, preddinarskem, dinarskem in submediteranskem območju Slovenije. Oligolektična, specializirana za Apiaceae. Bivoltina, dejavna od aprila do junija ter julija in avgusta.

Vrsto *Andrena fulvicornis* je več avtorjev imelo za sinonim vrste *A. nitidiuscula*. SCHMID-EGGER & DOCZKAL (1995) sta ji vrnila status vrste in opisala razlike.

European species. In the pre-Alpine, pre-Dinaric, Dinaric and sub-Mediterranean regions of Slovenia. Oligolectic, specialized on Apiaceae. Bivoltine, active from April to June and in July and August.

Andrena fulvicornis was treated as a synonym of *A. nitidiuscula* by several authors. SCHMID-EGGER & DOCZKAL (1995) restored its rank of a species and described the distinguishing characters.

VOGRIN, 1955: Podčetrtek, 30. 6., 12. 7.; GOGALA, 1999 (as *A. nitidiuscula*)

Kostanjevica, WL37, 13. 5. 1994, 1♀, A. Gogala leg., PMSL

Sp. Pirniče, VM51, 8. 6. 1995, 2♀, A. Gogala leg., PMSL

Sp. Branica, Čipnje, VL07, 25. 5. 1997, 1♀, A. Gogala leg., 23. 5. 1993, 1♂, A. Gogala leg., PMSL

Log, Lukovica, VL59, 13. 5. 1992, 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 6. 6. 1993, 1♂, A. Gogala leg., PMSL

Komen, Vale, UL97, 2. 4. 1995, 2♂, A. Gogala leg., PMSL

Gradišče pri Lukovici, VM71, 12. 6. 1996, 1♂, A. Gogala leg., PMSL

Preserje, Sv. Ana, VL59, 18. 5. 1999, 1♂, A. Gogala leg., PMSL

Andrena griseobalteata* Dours, 1872Andrena erythrocnemis* auct.

Mediterranska vrsta. V Sloveniji najdena le v Podčetrtku (subpanonsko območje). Verjetno oligolektična, specializirana za Apiaceae. Univoltina, dejavna od maja do julija.

Andrena griseobalteata je prepoznavna po gosti punktiranosti tergitev, tudi prvega. Vključena je v določevalni ključ DYLEWSKE (1987) kot *A. erythrocnemis*.

Mediterranean species. In Slovenia recorded only at Podčetrtek (sub-Pannonian region). Probably oligolectic, specialized on Apiaceae. Univoltine, active from May to July.

Andrena griseobalteata is recognized by the dense punctation of its terga, including the first one. It is classified in the determination key by DYLEWSKA (1987) as *A. erythrocnemis*.

GOGALA, 1994, 1999

Podčetrtek, WM41, 14. 6. 1932, 1♂, E. Jaeger leg., F. Gusenleitner det. 1993, PMSL (GOGALA, 1994)

Andrena nitidiuscula* Schenck, 1853Andrena lucens* Imhoff, 1868

Palearktična vrsta. V subpanonskem, predalpskem, dinarskem in submediteranskem območju Slovenije. Oligolektična, specializirana za Apiaceae. Univoltina, dejavna od junija do septembra.

Palaeartic species. In the sub-Pannonian, pre-Alpine, Dinaric and sub-Mediterranean regions of Slovenia. Oligolectic, specialized on Apiaceae. Univoltine, active from June to September.

GRAEFFE, 1902: Tolmin, 8.; VOGRIN, 1955: Podčetrtek, 11. 6., 13. – 24. 7.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 28. 8. 1929, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 24. 7. 1991, 1♀, A. Gogala leg., 11. 7. 1990, 1♂, A. Gogala leg., 26. 7. 1990, 1♂, A. Gogala leg., 13. 7. 1991, 1♂, A. Gogala leg., PMSL

Izvir Rižane, VL14, 17. 8. 1993, 1♀, A. Gogala leg., PMSL

Pokojišče, Zavrh, VL48, 24. 8. 1996, 1♀, A. Gogala leg., PMSL

Preserje, Sv. Ana, VL59, 3. 8. 1999, 1♀, A. Gogala leg., PMSL

Brezovica pri Lj., VL59, 29. 7. 1991, 1♂, A. Gogala leg., PMSL

Bloke: Volčje, VL67, 12. 7. 2011, 1♂, A. Gogala leg., PMSL

***Andrena pallitarsis* Pérez, 1903**

Evropska vrsta, široko razširjena v Sloveniji. European species, widely distributed in Slovenia. Oligolektična, specializirana za Apiaceae. Oligolectic, specialized on Apiaceae. Univoltina, dejavna julija in avgusta. Univoltine, active in July and August.

PITTIONI & SCHMIDT, 1943: 36—"Podčetrtek"; VOGRIN, 1955: Podčetrtek, 3. – 26. 8., 18. 9.;

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 27. 7. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 15. 8. 1991, 1♀, A. Gogala leg., 30. 7. 1991, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 31. 8. 1991, 1♀, A. Gogala leg., PMSL, 7. 9. 1996, 1♀, A. Gogala vid.

Cerknica, Dol. Jezero, VL56, 16. 7. 1993, 1♀, A. Gogala leg., PMSL

Ig, Draga, VL68, 28. 7. 1993, 1♀, A. Gogala leg., PMSL

Kanal, Ajba, UM90, 26. 7. 1994, 1♀, A. Gogala leg., PMSL

Dragonja, Stena, UL93, 11. 9. 1995, 1♀, A. Gogala leg., PMSL

Preserje, Sv. Ana, VL59, 3. 8. 1999, 1♀, A. Gogala leg., PMSL

Zaplana, VL39, 23. 7. 1999, 1♀, A. Gogala leg., PMSL

Brezovica pri Lj., VL59, 29. 7. 1991, 3♂, A. Gogala leg., PMSL

Tinsko, WM41, 8. 7. 1993, 1♂, A. Gogala leg., PMSL

Gradišče pri Lukovici, VM71, 31. 7. 1996, 1♀, A. Gogala leg., PMSL

Sorško polje, VM51, 28. 7. 1935, 1♀, M. Hafner leg., PMSL

Planinsko polje, VL47, 12. 8. 1993, 1♀, S. Polak leg., det. A. Gogala

***Andrena pontica* Warncke, 1972**

Pontska vrsta. V Sloveniji ob reki Savi pri Ljubljani (predalpsko območje) in na Cerknškem jezeru (dinarsko območje). Verjetno polilektična vrsta (DYLEWSKA, 1987). Opazoval sem jo na Apiaceae. Verjetno bivoltina, dejavna maja in junija ter julija in avgusta, a v Sloveniji smo jo našli le junija. Pontic species. In Slovenia along the Sava river near Ljubljana (pre-Alpine region) and Lake Cerknica (Dinaric region). Probably polylectic species (DYLEWSKA, 1987). I observed it on Apiaceae. Probably bivoltine, active in May and June and in July and August, but recorded in Slovenia only in June.

GOGALA, 1994, 1999

Ljubljana, Črnuče, VM60, 15. 6. 1993, 2♀, A. Gogala leg., 23. 6. 1993, 1♀, A. Gogala leg., PMSL

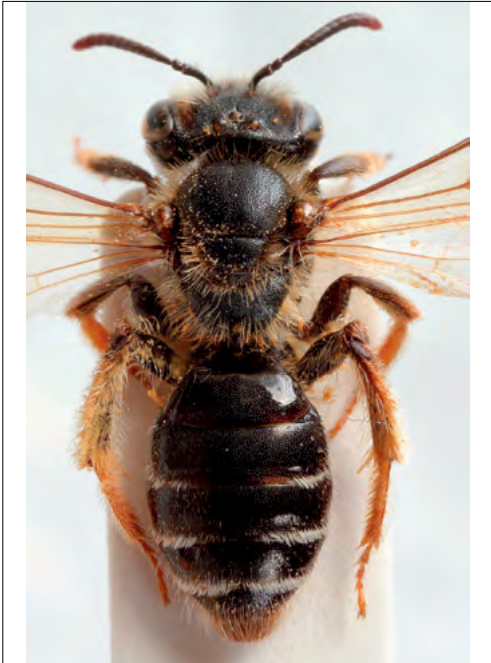
Cerknica, Dol. Jezero, VL56, 30. 6. 1994, 1♂, A. Gogala leg., PMSL



Slika / Figure 81: *Andrena chrysosceles* female on *Barbarea*. Planinsko polje, Planina, May 2009.



Slika / Figure 82: *Andrena curvana* female from Brje pri Komnu, Kras, collected in August 1991.



Slika / Figure 83: *Andrena fulvicornis* female from Sp. Pirniče, collected in June 1995.



Slika / Figure 84: *Andrena griseobalteata*, abdomen of the male from Podčetrtek, collected in June 1932.



Slika / Figure 85: *Andrena griseobalteata*, male genitalia.



Slika / Figure 86: *Andrena nitidiuscula* female from Zavrh, Pokojišče, collected in August 1996.



Slika / Figure 87: *Andrena pallitarsis* female from Sv. Ana, Preserje, collected in August 1999.



Slika / Figure 88: *Andrena pontica* female from Črnuče near Ljubljana, collected in June 1993.

Subgenus *Opandrena* Robertson, 1902

Andrena schencki Morawitz, 1866

Andrena labiata, Stoeckhert, 1930

Evropska vrsta. V alpskem, predalpskem, dinarskem in subpanonskem območju Slovenije. Polilektrična vrsta. Univoltina, dejavna od maja do julija.

European species. In the Alpine, pre-Alpine, Dinaric and sub-Pannonian regions of Slovenia. Polylectic species. Univoltine, active from May to July.

VOGRIN, 1955: Podčetrtek, 17. – 28. 5., 15. 6., 8. 7., Jaeger leg.; GOGALA, 1994, 1999

Podčetrtek, WM41, 16. 5. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Bohinj: Ukanc, VM02, 8. 7. 1992 on *Trifolium*, 1♀, A. Gogala leg., 25. 5. 1995, 1♀, A. Gogala leg., PMSL

Pl. Vogar, VM12, 7. 7. 1995, 1♀, A. Gogala leg., PMSL

Štatenberg, WM53, 15. 5. 1994, 1♂, A. Gogala leg., PMSL

Čezsoča, UM83, 2. 6. 1994, 1♂, A. Gogala leg., PMSL

Zadlog, Drgota, 720 m, VL28, 29. 5. 1999, 1♂, A. Gogala leg., PMSL

Cerkniško jezero: Dol. Jezero, VL56, 22. 6. 2005 on *Trifolium*, 1♀, photo A. Gogala



Slika / Figure 89: *Andrena schencki* female on *Trifolium*. Dolenje Jezero, Cerkniško jezero, June 2005.

Subgenus *Oreomelissa* Hirashima & Tadauchi, 1975

Andrena coitana (Kirby, 1802)

Boreomontanska vrsta. V alpskem, predalpskem in dinarskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna julija in avgusta.

Boreo-montane species. In the Alpine, pre-Alpine and Dinaric regions of Slovenia. Polylectic species. Univoltine, active in July and August.

WARNCKE, 1967b: 574—"Loitsch" (= Logatec); GOGALA, 1994, 1999
Solčava, VM74, 20. 7. 1937, 1♀, Taubert leg., PMSL (GOGALA, 1994)
Bohinj: Ukanc, VM02, 8. 7. 1992, 1♀, A. Gogala leg., PMSL
Begunjščica, VM44, 3. 8. 1994, 2♀, A. Gogala leg., PMSL
Košuta: Pl. Šija, VM44, 5. 8. 1994, 1♀, A. Gogala leg., 14. 8. 1997, 1♀, A. Gogala leg., PMSL
Krma, VM14, 10. 8. 1994 on *Leontodon*, 1♀, A. Gogala leg., PMSL
Gradišče pri Lukovici, VM71, 31. 7. 1996, 1♀, A. Gogala leg., PMSL
Podpeč, Jezero, VL59, 5. 8. 1997 on *Campanula*, 1♀, A. Gogala leg., PMSL
Krvavec, VM62, 29. 7. 1992, 1♂, A. Gogala leg., PMSL
Sp. Brnik, VM62, 10. 8. 1993, 1♂, A. Gogala leg., PMSL
Soriška planina, VM22, 23. 7. 1994, 1♂, A. Gogala leg., PMSL



Slika / Figure 90: *Andrena coitana* female from Jezero, Podpeč, collected in August 1997.

Subgenus *Parandrenella* Popov, 1958

Andrena atrata Friese, 1887

Andrena bicarinata auct.

Vzhodnomediterranska vrsta. V Sloveniji v Hrastovljah (Istra, submediteransko območje). Verjetno polilektrična vrsta, ki obiskuje predvsem Brassicaceae. Bivoltina, dejavna maja in junija ter julija in avgusta.

East Mediterranean species. In Slovenia at Hrastovlje (Istria, sub-Mediterranean region). Probably polylectic species, visiting mainly Brassicaceae. Bivoltine, active in May and June and in July and August.

GOGALA, 1994, 1999

Hrastovlje, VL14, 13. 6. 1992, 1♀, A. Gogala leg., PMSL



Slika / Figure 91: *Andrena atrata* female from Hrastovlje, Istria, collected in June 1992.

Subgenus *Plastandrena* Hedicke, 1933

Andrena bimaculata (Kirby, 1802)

Andrena bluethgeni Stoeckhert, 1930

Palearktična vrsta. V subpanonskem območju Slovenije. Polilektična vrsta. Bivoltina, dejavna od marca do maja ter julija in avgusta. Druga generacija ni bila najdena v Sloveniji.

Palearctic species. In the sub-Pannonian region of Slovenia. Polylectic species. Bivoltine, active from March to May and in July and August. Second generation has not been recorded in Slovenia.

GOGALA, 1994, 1999

Podčetrtek, WM41, 1. 4. 1929, 1♂, 20. 3. 1935, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Dobova, Mihalovec, WL58, 27. 3. 1994 on *Brassica*, 2♀ 2♂, A. Gogala leg., PMSL

Borl, WM73, 22. 4. 1995, 1♂, A. Gogala leg., PMSL



Slika / Figure 92: *Andrena bimaculata* female from Mihalovec, Dobova, collected in March 1994.

***Andrena pilipes* Fabricius, 1781**? *Apis riparia* Scopoli, 1763

Palaearktična vrsta. Identiteta Scopolijeve vrste *Apis riparia* ni jasna, zato je njena interpretacija kot *A. pilipes* nezanesljiva. Našel jo je na cvetovih barbice (*Barbarea*, poročana kot *Erysimum barbareae*) v strugi Idrije pri Idriji, kjer je živel in delal. Polilektična vrsta, ki najraje obiskuje Brassicaceae. Bivoltina, dejavna aprila in maja ter od julija do septembra.

Palaearctic species. The identity of Scopoli's *Apis riparia* is not clear, so its interpretation as *A. pilipes* is not reliable. He found it on the flowers of *Barbarea* (recorded as *Erysimum barbareae*) in the riverbed of the Idrija river near Idrija where he lived and worked. Polylectic species with preference for Brassicaceae. Bivoltine, active in April and May and from July to September.

SCOPOLI, 1763 (?): Idrija river (*prope litus fluvii Idriae*)***Andrena tibialis* (Kirby, 1802)**

Palaearktična vrsta. V Sloveniji le najdba v Mariboru (subpanonsko območje). Polilektična vrsta. Univoltina, dejavna od aprila do junija.

Palaearctic species. In Slovenia only a record from Maribor (sub-Pannonian region). Polylectic species. Univoltine, active from April to June.

GOGALA, 1994, 1999

Maribor, WM55, 14. 4. 1921, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Subgenus *Poecilandrena* Hedicke, 1933***Andrena labiata* Fabricius, 1781***Andrena cingulata* auct.

Palaearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina, dejavna od aprila do junija.

Palaearctic species, widely distributed in Slovenia. Polylectic species. Univoltine, active from April to June.

GRÄFFE, 1892: Lipica; VOGRIN, 1955: Podčetrtek, 28. 4., 8.- 16. 5.; GOGALA, 1991, 1994, 1999;

WESTRICH, 2010: Komen, on *Ornithogalum kochii*.

Podčetrtek, WM41, 10. 5. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log. Lukovica, VL59, 29. 4. 1991, 1♀ 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 1. 5. 1991, 1♀, A. Gogala leg., PMSL

Kregolišče, VL07, 1. 6. 1991, 1♀, A. Gogala leg., 26. 4. 1992, 1♂, A. Gogala leg., PMSL

Črni Vrh, Pasja ravan, VM40, 30. 5. 1995, 1♀, A. Gogala leg., PMSL

Sočerga, Veli Badin, VL13, 14. 6. 1991, 1♂, A. Gogala leg., PMSL

Podpeč, VL14, 23. 5. 1995, 1♂, A. Gogala leg., PMSL

Krvavi Potok, Mihele, VL15, 17. 5. 1996, 1♂, A. Gogala leg., PMSL

Krim, VL58, 25. 5. 1996, 1♂, A. Gogala leg., PMSL

Kum: Ključevica, WM00, 8. 5. 1998, 1♂, A. Gogala leg., PMSL
 Veliki Dol, VL07, 27. 4. 2008 on *Ornithogalum*, 1♀, photo A. Gogala
 Divača, VL16, 19. 5. 1997, 1♀, I. Bischoff leg., det. A. Gogala
 Tržič, Zadnja vas, VM43, 10. 5. 1998, 1♀, A. Gogala vid.
 Dragonja, Stena, UL93, 6. 5. 2000, 1♂, A. Gogala vid.
 Kazlje, VL16, 30. 5. 2004, 1♀, A. Gogala vid.
 Škofi, VL07, 22. 4. 2017, 1♀ on *Ornithogalum*, A. Gogala vid.

Andrena potentillae Panzer, 1809

Evropska vrsta. V Sloveniji na Krasu in Kraškem robu. Oligolektična, specializirana za rod *Potentilla* (Rosaceae). Univoltina, dejavna marca in aprila. European species. In Slovenia in the Kras and at the Karst edge. Oligolectic, specialized on *Potentilla* (Rosaceae). Univoltine, active in March and April.

GOGALA, 1991, 1994, 1999

Brje pri Komnu, VL07, 24. 3. 1991, 3♀, A. Gogala leg., PMSL, 25. 3. 2001 on *Potentilla tommasiniana*, 1♀, photo A. Gogala
 Gorjansko, UL97, 15. 3. 1992, 1♀, A. Gogala leg., PMSL
 Komen, Vale, UL97, 2. 4. 1995, 3♂, A. Gogala leg., PMSL
 Zanigrad, VL14, 27. 3. 2010 on *Potentilla*, 1♀ 1♂, A. Gogala vid., 2. 4. 2011, 1♀, A. Gogala vid.
 Lukovec, Golec, VL07, 24. 3. 2012, 1♀ 1♂ on *Potentilla*, A. Gogala vid.
 Tublje pri Komnu, VL07, 25. 3. 2017, 2♀ on *Potentilla tommasiniana*, A. Gogala vid.
 Podgorje, VL14, 1. 4. 2017, 1♀ on *Potentilla*, A. Gogala vid.

Andrena seminuda Friese, 1896

Andrena setigera Alfken, 1911

Vzhodnomediterranska vrsta, v subpanonskem območju Slovenije. Polilektična vrsta. Univoltina, dejavna aprila in maja. East Mediterranean species, in the sub-Pannonian region of Slovenia. Polylectic species. Univoltine, active in April and May.

GOGALA, 1994, 1999

Podčetrtek, WM41, 15. 5. 1932, 1♀, 7. 5. 1934, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)
 Obrež, Grabe, WM94, 22. 4. 1995, 2♂, A. Gogala leg., PMSL

***Andrena viridescens* Viereck, 1916**

***Andrena cyanescens* Nylander, 1852**

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za rod *Veronica* (Scrophulariaceae). Univoltina, dejavna od aprila do junija.

European species, widely distributed in Slovenia. Oligolectic, specialized on *Veronica* (Scrophulariaceae). Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 12. 3., 16. – 26. 4., 17. – 27. 5., 3. 6.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 17. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 25. 4. 1991, 1♀ 1♂, A. Gogala leg., 29. 4. 1991, 1♀, A. Gogala leg., 8. 6. 1991, 1♀, A. Gogala leg., 16. 5. 2008, 1♀, A. Gogala leg., 16. 4. 1991, 1♂, A. Gogala leg., PMSL, 12. 5. 2008 on *Veronica*, 1♀, photo A. Gogala

Cerknica, Dol. Jezero, VL56, 9. 5. 1995, 1♀, A. Gogala leg., PMSL

Vinje pri Moravčah, VM71, 17. 5. 1997, 1♀, A. Gogala leg., PMSL

Pokojišče, VL48, 19. 5. 1993, 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 8. 4. 1996, 1♂, A. Gogala leg., PMSL



Slika / Figure 93: *Andrena labiata* female on *Ornithogalum*. Veliki Dol, Kras, April 2008.



Slika / Figure 94: *Andrena potentillae* female on *Potentilla tommasiniana*. Brje pri Komnu, Kras, March 2001.



Slika / Figure 95: *Andrena seminuda* male from Grabe, Obrež, collected in April 1995.



Slika / Figure 96: *Andrena viridescens* female on *Veronica*. Lukovica pri Brezovici, May 2008.

Subgenus *Poliandrena* Warncke, 1968

Andrena florea Fabricius, 1793

Evromeditranska vrsta. V submediteranskem in subpanonskem območju Slovenije. Oligolektnična, specializirana za rod *Bryonia* (Cucurbitaceae). Univoltina, dejavna od maja do julija.

Euro-Mediterranean species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Oligolectic, specialized on *Bryonia* (Cucurbitaceae). Univoltine, active from May to July.

VOGRIN, 1955: Podčetrtek, 4. 6.; GOGALA, 1991, 1994, 1999; ZANDIGIACOMO & al., 2013: 112—Tolmin (coll.Gräffe)

Podčetrtek, WM41, 28. 5. 1934, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Bezovica, VL14, 14. 6. 1991, 2♀, A. Gogala leg., PMSL

Osp, VL14, 13. 6. 1992 on *Bryonia*, 1♀, A. Gogala leg., PMSL

Škocjan, VL25, 15. 6. 1994, 1♀, A. Gogala leg., PMSL

Obrež, Grabe, WM94, 29. 6. 1995, 1♂, A. Gogala leg., PMSL

Zanigrad, VL14, 16. 5. 1998, 1♀, A. Gogala vid.

Štanjel, VL17, 20. 5. 2010, 1♂, A. Gogala vid., 23. 5. 2010 on *Bryonia dioica*, 1♀, photo A. Gogala

Andrena polita Smith, 1847

Zahodnopalearktična vrsta. Oligolektična, specializirana za Asteraceae, najraje ima Cichorioideae. Univoltina, dejavna od maja do septembra.

West Palaearctic species. Oligolectic, specialized on Asteraceae with preference for Cichorioideae. Univoltine, active from May to September.

Mocsáry, 1897: 94—"Kapornak" (= Krplivnik)



Slika / Figure 97: *Andrena florea* female on *Bryonia dioica*. Štanjel, Kras, May 2010.

Subgenus *Proxiandrena* Schmid-Egger, 2005*Andrena alutacea* Stoeckhert, 1942

Vzhodnomediterranska vrsta. Razširjena v predalpskem, dinarskem in submediteranskem območju Slovenije. Oligolektična, specializirana za Apiaceae. Univoltina, dejavna od junija do avgusta.

Vrsto *Andrena alutacea* je več avtorjev imelo za sinonim vrste *A. proxima* do revizije Schmid-Eggerja (SCHMID-EGGER, 2005) s ključem za vrste podrodu *Proxiandrena*. Obdobje letanja obeh vrst podrodu *Proxiandrena* se v Sloveniji razlikuje.

East Mediterranean species. Distributed in the pre-Alpine, Dinaric and sub-Mediterranean regions of Slovenia. Oligolectic, specialized on Apiaceae. Univoltine, active from June to August.

Andrena alutacea was treated as a synonym of *A. proxima* by several authors until the revision by SCHMID-EGGER (2005) with a key to *Proxiandrena* species. The flight period of both *Proxiandrena* species in Slovenia differs from each other.

GOGALA, 2011

- Log, Lukovica, VL59, 6. 7. 1991, 1♀, A. Gogala leg., PMSL
 Brezovica pri Lj., VL59, 29. 7. 1991, 1♀, A. Gogala leg., PMSL
 Rakitna, VL58, 11. 6. 1993, 1♀, A. Gogala leg., PMSL
 Slavnik, VL14, 23. 6. 1991, 1♀, A. Gogala leg., PMSL
 Nanos: Sv. Hieronim – Pleša, VL27, 4. 7. 1998, 1♀, A. Gogala leg., PMSL
 Čaven: planinska koča, VL18, 7. 7. 2007 on *Laserpitium siler*, 1♀, A. Gogala leg., PMSL
 Kranj, Brdo, VM52, 14. 6. 2007, 1♀, A. Gogala leg., PMSL
 Iški Vintgar: Vrbica, VL68, 15. 6. 2011 on *Laserpitium siler*, 3♀, A. Gogala vid.
 Čaven: Kucelj, VL08, 16. 6. 2018 on *Laserpitium siler*, 1♀, A. Gogala vid.
 Zg. Gorjuše, 1020 m, VM23, 11. 7. 2019 on *Laserpitium latifolium*, 1♀, A. Gogala leg.

Andrena proxima (Kirby, 1802)

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Apiaceae. Univoltina, dejavna od aprila do junija.

European species, widely distributed in Slovenia. Oligolectic, specialized on Apiaceae. Univoltine, active from April to June.

- HOFENEDER & FULMEK 1952: 484—"Römerbad" (= Rimske toplice); VOGRIN, 1955: Podčetrtek, 6. – 8. 5., 15. 6., 23. 8.; GOGALA, 1991, 1994, 1999; VAN DER SMISSEN, 2010: 203—"Loitsch-Krain" (= Logatec)
 Podčetrtek, WM41, 21. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Kregolišče, VL07, 19. 4. 1992, 1♀, A. Gogala leg., PMSL
 Kranj, Brdo, VM52, 8. 5. 2007, 1♀2♂, A. Gogala leg., PMSL
 Škofji, VL07, 1. 5. 1991, 1♂, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 28. 4. 1992, 2♂, A. Gogala leg., PMSL, 14. 4. 2005 on *Euphorbia*, 1♂, photo
 A. Gogala
 Gaberje, Koboli, VL17, 1. 5. 1995, 1♂, A. Gogala leg., PMSL
 Iški Vintgar: Vrbica, VL68, 1. 5. 2009 on *Euphorbia carniolica*, 1♂, A. Gogala leg., PMSL
 Planinsko polje: Laze, 445 m, 6. 5. 2009, 1♂, T. Faasen leg., coll. M. de Groot
 Krka, VL88, 7. 5. 1994, 1♀ 1♂, A. Gogala vid.
 Ig, Draga, VL68, 19. 5. 2017, 1♀, A. Gogala leg., PMSL



Slika / Figure 98: *Andrena alutacea* female on *Laserpitium siler*. Čaven, July 2007.



Slika / Figure 99: *Andrena proxima* male on *Euphorbia carniolica*. Vrbica, Iški Vintgar, May 2009.

Subgenus *Ptilandrena* Robertson, 1902

Andrena fulvata Stoeckhert, 1930

Evropska vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Univoltina, dejavna od aprila do junija.

European species, widely distributed in Slovenia. Polylectic species. Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 12. 4., 1. – 15. 5.; GOGALA, 1991, 1994, 1999; WESTRICH, 2010: Komen, on *Ornithogalum kochii*.

Podčetrtek, WM41, 12. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 14. 5. 1991, 1♀, A. Gogala leg., PMSL

Dragomer, VL59, 10. 4. 1993, 1♀ 1♂, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 25. 4. 1993, 1♀, A. Gogala leg., PMSL, 4. 5. 2008 on *Asparagus tenuifolius*, 1♀, photo A. Gogala



Slika / Figure 100: *Andrena fulvata* female on *Asparagus tenuifolius*. Brje pri Komnu, Kras, May 2008.

Polhov Gradec, VM40, 30. 3. 1994, 1♀, A. Gogala leg., PMSL
 Kamniška Bistrica, VM63, 7. 5. 1995, 1♀, A. Gogala leg., PMSL
 Iški Vintgar, VL68, 25. 4. 1998, 1♀, A. Gogala leg., 6. 5. 1995, 1♀, A. Gogala leg., PMSL
 Predgrad, Laze, WL03, 12. 3. 1994, 3♂, A. Gogala leg., PMSL
 Bukovnica, XM07, 19. 4. 1992, 1♂, S. Gomboc leg., PMSL
 Lj. barje: Plešivica, VL59, 12. 6. 1991, 2♀, A. Gogala leg., PMSL
 Materija, Odolina, VL24, 1. 5. 2000, 1♀, A. Gogala leg., PMSL
 Kodreti, Dolanci, VL17, 2. 5. 2000, 1♀, A. Gogala leg., PMSL, 15. 5. 2004 on *Symphytum officinale*,
 1♀, photo A. Gogala
 Iška, VL68, 17. 3. 1994, 1♂, A. Gogala leg., PMSL
 Kostanjevica na Krki, WL37, 13. 5. 1994, 1♀, A. Gogala vid.
 Črni Vrh, Pasja ravan, VM40, 29. 4. 1995, 1♀, A. Gogala vid.
 Krim, VL58, 25. 5. 1996, 1♀, A. Gogala vid.
 Brestovica pri Povirju, VL16, 1. 5. 2000, 1♀, A. Gogala vid.

Subgenus *Simandrena* Pérez, 1890

Andrena combinata (Christ, 1791)

Palearktična vrsta, široko razširjena v Sloveniji.
 Polilektična vrsta. Bivoltina, dejavna maja in junija ter julija in avgusta.

SCHMID-EGGER & SCHEUCHL (1997) razlikujeta med bivoltino vrsto *Andrena mehelyi* Alfken, 1936 in univoltino *A. combinata*. Slovenske primerke morfološko pripisujemo vrsti *A. combinata*, vendar so verjetno bivoltini, saj smo samce našli od maja do avgusta.

Palearctic species, widely distributed in Slovenia. Polylectic species. Bivoltine, active in May and June and in July and August.

SCHMID-EGGER & SCHEUCHL (1997) discriminate between *Andrena mehelyi* Alfken, 1936, a bivoltine species and the univoltine *A. combinata*. Slovenian specimens are morphologically attributed to *A. combinata*, but probably bivoltine as males were found from May to August.

GOGALA, 1994, 1999

Podčetrtek, WM41, 9. 8. 1932, 1♂, 23. 8. 1932, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Rakitna, VL58, 11. 6. 1993, 1♀1♂, A. Gogala leg., PMSL
 Ilirska Bistrica, Štanga, VL44, 15. 6. 1994, 1♀, A. Gogala leg., PMSL
 Podkoren, VM05, 1. 7. 1994, 1♀, A. Gogala leg., PMSL
 Slavnik, VL14, 9. 7. 1995, 1♀, A. Gogala leg., PMSL
 Pokojišče, VL48, 19. 5. 1993, 1♂, A. Gogala leg., PMSL
 Prtovč, VM32, 1. 7. 1995, 1♂, A. Gogala leg., PMSL
 Gorjuše, Kranjska dolina, 1080 m, VM23, 6. 6. 2019 on Apiaceae, 1♀, A. Gogala leg., PMSL

Andrena congruens Schmiedeknecht, 1883*Andrena confinis* Stoeckert, 1930

Zahodnopalearktična vrsta. V subpanonskem območju Slovenije. Polilektična vrsta. Bivoltina, dejavna aprila in maja ter julija in avgusta. SCHMID-EGGER & SCHEUCHL (1997) imata takson *Andrena confinis* za samostojno vrsto. Samico iz Podčetrka bi v tem primeru določili kot *A. confinis*, samca iz bližnjega Olimja pa kot *A. congruens*. Zato imeni jemljem za sinonima, dokler novi dokazi ne pokažejo drugače.

West Palaearctic species. In the sub-Pannonian region of Slovenia. Polylectic species. Bivoltine, active in April and May and in July and August.

SCHMID-EGGER & SCHEUCHL (1997) treat *Andrena confinis* as a distinct species. The female from Podčetrtek would be classified as *A. confinis* in this case and the male from nearby Olimje as *A. congruens*. So I treat the names as synonyms until new evidence confirms otherwise.

GOGALA, 1994, 1999

Podčetrtek, WM41, 10. 4. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Olimje, WM41, 8. 7. 1993, 1♂, A. Gogala leg., PMSL

Andrena dorsata (Kirby, 1802)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta. Bivoltina, dejavna od marca do maja ter julija in avgusta.

Vsi preverjeni primerki iz Slovenije so tipični predstavniki vrste *A. dorsata*, primerkov ozko sorodne vrste *Andrena propinqua* Schenck, 1853 pa nismo našli.

West Palaearctic species, widely distributed in Slovenia. Polylectic species. Bivoltine, active from March to May and in July and August.

All checked specimens from Slovenia are typical representatives of *A. dorsata*. No specimens of the closely related *Andrena propinqua* Schenck, 1853 were found.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 22. 7. 1936, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Ljubljana, Črnuče, VM60, 23. 4. 1993, 1♀ (GOGALA, 1994)

Log, Lukovica, VL59, 5. 4. 1991, 1♀1♂, A. Gogala leg., 14. 5. 1991, 1♀, A. Gogala leg., PMSL

Kras: Vale, UL97, 14. 4. 1991, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 12. 4. 1992, 1♀, A. Gogala leg., PMSL

Cerkniško jezero: Dol. Jezero, VL56, 25. 4. 1992, 1♀, A. Gogala leg., PMSL, 31. 3. 2012 on *Salix*, 1♀, photo A. Gogala

Ilirska Bistrica, Štanga, VL44, 22. 7. 1992, 1♀, A. Gogala leg., PMSL

Nanos: Pleša, VL27, 25. 7. 1992, 1♀ 2♂, A. Gogala leg., PMSL

Muriša, XM25, 16. 7. 1995, 1♀, A. Gogala leg., PMSL

Polhov Gradec, VM40, 8. 4. 1992, 1♂, A. Gogala leg., PMSL

Virštanj, WM41, 8. 7. 1993, 2♂, A. Gogala leg., PMSL

Koštabona, Škrline, VL03, 5. 3. 1994 on *Salix*, 1♂, A. Gogala leg., 29. 6. 1993, 2♂, A. Gogala leg., PMSL

Famlje, VL25, 18. 3. 1994, 1♂, A. Gogala leg., PMSL

Sp. Šturmovci, WM73, 20. 4. 1996 on *Salix*, 1♂, A. Gogala leg., PMSLSočerga, Veli Badin, VL13, 1. 4. 2001 on *Prunus mahaleb*, 1♂, A. Gogala leg., PMSL

Topolovec, VL03, 9. 5. 1991, 2♀, A. Gogala leg., PMSL
 Dol pri Ljubljani, Senožeti, VM80, 16. 4. 2008 on *Taraxacum*, 1♀, A. Gogala leg., PMSL
 Olimje, WM41, 8. 7. 1993, 1♂, A. Gogala leg., PMSL
 Brezovica pri Lj., VL59, 2. 4. 1991, 1♂, A. Gogala leg., PMSL
 Borl, WM73, 22. 4. 1995, 1♂, A. Gogala leg., PMSL
 Gradišče pri Lukovici, VM71, 31. 7. 1996, 1♂, A. Gogala leg., PMSL
 Planina, Jakovica, VL47, 22. 4. 1994, 1♂, S. Polak leg., det. A. Gogala
 Črni Vrh, Pasja ravan, VM40, 30. 3. 1994, 1♂, A. Gogala vid.
 Štatenberg, WM53, 7. 4. 1994, 1♀ 1♂, A. Gogala vid.
 Sp. Brnik, VM61, 9. 4. 1994, 1♂, A. Gogala vid.
 Padna, UL93, 17. 4. 1995, 1♀, A. Gogala vid.
 Obrež, Grabe, WM93, 22. 4. 1995, 1♀, A. Gogala vid.
 Beričevo, VM70, 18. 4. 1996, 1♀, A. Gogala vid.
 Dragonja, UL93, 7. 3. 1997 on *Salix*, 1♂, A. Gogala vid., 22. 3. 1997, 1♀ 1♂, A. Gogala vid.
 Planinsko polje: Laze, VL47, 15. 3. 1997 on *Salix*, 1♀, A. Gogala vid.
 Vinje pri Moravčah, VM71, 3. 4. 1997, 1♂, A. Gogala vid.
 Dobrova, Gabrje, VM50, 5. 4. 1999, 1♂, A. Gogala vid.
 Bizeljsko: peskokop Župjek, WL59, 21. 4. 2000, 1♂, A. Gogala vid.
 Planina, Planinsko polje, VL47, 22. 4. 2000, 1♀ 1♂, A. Gogala vid., 27. 5. 2010 on *Crataegus*, 1♀,
 A. Gogala leg.
 Blatna Brezovica, VL49, 16. 4. 2009, 1♀ 1♂, A. Gogala vid.
 Vel. Račna, Radensko polje, VL78, 29. 3. 2012, 1♀, A. Gogala vid.
 Krkavče, Rov, UL93, 12. 4. 2012, 1♀, T. Trilar leg.

Andrena susterai Alfken, 1914

Pontska vrsta. V submediteranskem in subpanonskem območju Slovenije. Polilektična vrsta, na Krasu je maja njen vir hrane *Cotinus coggygria* (Anacardiaceae). Bivoltina, dejavna aprila in maja ter julija in avgusta.

Pontic species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Polylectic species, in the Kras its food source in May is *Cotinus coggygria* (Anacardiaceae). Bivoltine, active in April and May and in July and August.

GOGALA, 1994, 1999, 2011

Kregolišče, VL07, 16. 5. 1992 on *Cotinus coggygria*, 1♀, A. Gogala leg., PMSL
 Podpeč, VL14, 23. 5. 1995, 1♀, A. Gogala leg., PMSL
 Sočerga, Veli Badin, VL13, 2. 5. 2009 on *Cotinus coggygria*, 1♀, A. Gogala leg., PMSL
 Obrež, Grabe, WM94, 29. 6. 1995, 1♂, A. Gogala leg., PMSL

***Andrena thomsoni* DUCKE, 1898**

Severnomediteranska vrsta. V Sloveniji na Kraškem robu v Istri (submediteransko območje). Polilektična vrsta, obiskuje *Prunus* in *Salix* spomladi ter rodova *Inula* in *Daucus* junija (DUCKE, 1898). Bivoltina, dejavna od marca do maja ter junija.

Andrena thomsoni je v ključu za vrste podrodu *Simandrena* Tadauchija (1995), a le za samice. Samice prepoznamo po prvem členu flagela tipalk, ki je daljši od členov 2 in 3 skupaj (TADAUCHI, 1995). Tergiti so zelo gladki, z le malo drobnih gubic in por. Samce prepoznamo po črnih dlakah na glavi, le med tipalkama in na temenu je nekaj sivih dlak (DUCKE, 1898).

North Mediterranean species. In Slovenia at the Karst edge in Istria (sub-Mediterranean region). Polylectic species visiting *Prunus* and *Salix* in spring, *Inula* and *Daucus* in June (DUCKE, 1898). Bivoltine, active from March to May and in June.

Andrena thomsoni is included in the key to the *Simandrena* species by TADAUCHI (1995), but only in females. Females are recognized by the first flagellar segment, which is longer than segments 2 and 3 together (TADAUCHI, 1995). The terga are very shiny with very fine wrinkles and punctures. Males are recognized by black hairs on the head, only between feelers and on the vertex there are some grey hairs (DUCKE, 1898).

GOGALA, 2009

Podpeč, VL14, 1. 5. 1994 on *Crataegus*, 1♀, A. Gogala leg., PMSL

Hrastovlje, Zanimgrad, VL14, 29. 3. 2008 on *Prunus mahaleb*, 1♀, A. Gogala leg., PMSL



Slika / Figure 101: *Andrena combinata* female from Štanga, Ilirska Bistrica, collected in June 1994.



Slika / Figure 102: *Andrena dorsata* female. Senožeti, Dol pri Ljubljani, April 2008.



Slika / Figure 103: *Andrena susterai* female on *Cotinus coggygria*. Veli Badin, Sočerga, Istra, May 2009.



Slika / Figure 104: *Andrena thomsoni* female from Podpeč, collected in May 1994.

Subgenus *Taeniandrena* Hedicke, 1933

Andrena aberrans Eversmann, 1852

Andrena ratisbonensis Stoeckhert, 1924

Pontska vrsta. V Sloveniji v submediteranskem (Braniška dolina) in subpanonskem območju (Podčetrtek). Oligolektična, specializirana za rod *Chamaecytisus* (Fabaceae). Univoltina, dejavna od aprila do junija.

Pontic species. In Slovenia in the sub-Mediterranean (Braniška dolina) and sub-Pannonian (Podčetrtek) regions. Oligolectic, specialized on *Chamaecytisus* (Fabaceae). Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 11. 5., 1♀, Jaeger leg.; GOGALA, 1994, 1999

Podčetrtek, WM41, 14. 5. 1932, 1♀, 26. 4. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Sp. Branica, Čipnje, VL07, 1. 5. 1995, 1♂, A. Gogala leg., PMSL

Andrena intermedia Thomson, 1872***Andrena gelriae***, Stoeckhert, 1930

Evropska vrsta z boreomontansko razširjenostjo. V alpskem, predalpskem in dinarskem območju Slovenije, najdena tudi v Podčetrtku (subpanonsko območje) in na Nanosu (submediteransko območje). Oligolektična, specializirana za Fabaceae. Univoltina, dejavna od maja do julija.

European species with a boreo-montane distribution. In the Alpine, pre-Alpine and Dinaric regions of Slovenia, recorded also at Podčetrtek (sub-Pannonian region) and on Mt. Nanos (sub-Mediterranean region). Oligolectic, specialized on Fabaceae. Univoltine, active from May to July.

VOGRIN, 1955: Podčetrtek, 11. 6.; GOGALA, 1994, 1999
 Bohinj: Ukanc, VM02, 8. 7. 1992, 1♀, A. Gogala leg., PMSL
 Črni Vrh, Pasja ravan, VM40, 2. 6. 1993, 1♀2♂, A. Gogala leg., PMSL
 Črni Vrh, Smolnik, VM40, 30. 5. 1996, 1♂, A. Gogala leg., PMSL
 Kurešček, VL68, 6. 6. 1992, 2♂, A. Gogala leg., PMSL
 Cerknica, Selšček, VL57, 27. 5. 1998, 1♂, A. Gogala leg., PMSL
 Ig, Škrljje, Stražar, 720 m, VL68, 28. 5. 1999, 1♂, A. Gogala leg., PMSL
 Nanos: Sv. Hieronim – Pleša, VL27, 4. 7. 1998, 1♂, A. Gogala leg., PMSL
 Snežnik, 1600 m, VL54, 14. 6. 2019 on *Lotus*, 1♂, A. Gogala leg., PMSL
 Košuta: Pl. Šija, 1520 m, VM44, 25. 6. 2019 on *Lotus*, 1♂, A. Gogala leg., PMSL

Andrena lathyri Alfken, 1899

Evropska vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Fabaceae (*Vicia*, *Lathyrus*). Univoltina, dejavna od aprila do junija.

European species, widely distributed in Slovenia. Oligolectic, specialized on Fabaceae (*Vicia*, *Lathyrus*). Univoltine, active from April to June.

VOGRIN, 1955: Podčetrtek, 17. – 28. 4.; GOGALA, 1991, 1994, 1999
 Podčetrtek, WM41, 6. 5. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
 Brje pri Komnu, VL07, 16. 5. 1992, 1♀, A. Gogala leg., 10. 4. 1991, 1♀, A. Gogala leg., 2. 6. 1991, 1♀, A. Gogala leg., 9. 6. 1991, 1♀, A. Gogala leg., PMSL
 Kurešček, VL68, 6. 6. 1992, 1♀, A. Gogala leg., PMSL
 Gorjansko, UL97, 22. 5. 1993, 1♀, A. Gogala leg., PMSL
 Log, Lukovica, VL59, 28. 5. 1993, 1♀, A. Gogala leg., 11. 5. 2011 on *Vicia dumetorum*, 1♂, A. Gogala leg., PMSL
 Strunjan, UL94, 12. 5. 1998, 1♀, A. Gogala leg., PMSL
 Velika Račna, Radensko polje, VL78, 18. 4. 2009 on *Lathyrus linifolius*, 1♀, A. Gogala leg., PMSL
 Sočerga, Veli Badin, VL13, 16. 5. 1994, 1♂, A. Gogala leg., PMSL
 Dolsko, Vinje, VM70, 12. 5. 2006, 1♂, A. Gogala leg., PMSL
 Črni Vrh, Pasja ravan, VM40, 2. 6. 1993, 1♀, A. Gogala leg., PMSL
 Sečovlje, Fontanigge, UL93, 31. 5. 1997, 1♀, A. Gogala vid.
 Zadlog, Drgota, VL28, 29. 5. 1999, 1♀, A. Gogala vid.
 Lukovec, Škratlevica, VL07, 28. 4. 2018, 1♀ on *Lathyrus*, A. Gogala vid.

Andrena ovatula (Kirby, 1802)*Andrena fuscata* (Kirby, 1802)*Andrena albofasciata* Thomson, 1870

Palearktična vrsta, široko razširjena v Sloveniji. Polilektična vrsta, ki najraje obiskuje Fabaceae. Bivoltina, dejavna od aprila do junija ter od julija do septembra.

Palearctic species, widely distributed in Slovenia. Polylectic species with preference for Fabaceae. Bivoltine, active from April to June and from July to September.

GOGALA, 1991, 1994, 1999, 2018b

Podčetrtek, WM41, 16. 5. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 29. 6. 1991, 1♀, A. Gogala leg., 17. 8. 1991, 1♀, A. Gogala leg., 8. 5. 1992, 1♀, A. Gogala leg., 13. 5. 1992, 1♂, A. Gogala leg., 14. 5. 1991, 1♂, A. Gogala leg., 25. 5. 1991, 1♂, A. Gogala leg., 24. 7. 1991, 1♂, A. Gogala leg., 30. 7. 1991, 1♂, A. Gogala leg., PMSL

Kozina, VL15, 22. 6. 1991, 1♀, A. Gogala leg., PMSL

Obrov, VL24, 21. 5. 1993, 1♀, A. Gogala leg., PMSL

Pohorje: Rogla, WM24, 24. 7. 1993, 1♀, A. Gogala leg., PMSL

Stari trg ob Kolpi, WL03, 26. 5. 1993, 1♂, A. Gogala leg., PMSL

Radovna, VM24, 1. 6. 1993, 1♂, A. Gogala leg., PMSL

Koštabona, Škrlina, VL03, 29. 6. 1993, 1♂, A. Gogala leg., PMSL

Petanjci, WM86, 16. 7. 1995, 1♂, A. Gogala leg., PMSL

Petišovci, XM15, 16. 7. 1995, 1♂, A. Gogala leg., PMSL

Vinje pri Moravčah, VM71, 23. 5. 1997, 1♂, A. Gogala leg., PMSL

Kranj, Brdo, VM52, 8. 5. 2007, 1♂, A. Gogala leg., PMSL

Sorško polje, VM51, 28. 7. 1935, 1♀, M. Hafner leg., PMSL

Štatenberg, WM53, 7. 4. 1994, 1♂, A. Gogala vid.

Kostanjevica na Krki, WL37, 13. 5. 1994, 1♂, A. Gogala vid.

Dobova, Mihalovec, WL58, 13. 5. 1994, 1♂, A. Gogala vid.

Andrena producta Warncke, 1973

Vzhodnomediterranska vrsta. V Sloveniji v predalpskem območju. Oligolektična, specializirana za Fabaceae (npr. *Genista tinctoria*). Univoltina, dejavna od aprila do junija.

East Mediterranean species. In Slovenia in the pre-Alpine region. Oligolectic, specialized on Fabaceae (e.g. *Genista tinctoria*). Univoltine, active from April to June.

GOGALA, 1999

Log, Lukovica, VL59, 16. 6. 1996 on *Genista tinctoria*, 2♂, A. Gogala leg., PMSLLog, Lukovica, Liparjev grič, VL59, 15. 6. 2007 on *Genista tinctoria*, 1♀, A. Gogala leg., PMSL

Andrena similis* Smith, 1849**Andrena rufohispida* Dours, 1872**

Zahodnopalearktična vrsta. V submediteranskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Fabaceae. Univoltina, dejavna od aprila do julija.

West Palaearctic species. In the sub-Mediterranean and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Fabaceae. Univoltine, active from April to July.

GOGALA, 1991, 1994, 1999

Slavnik, VL14, 22. 5. 1991, 1♀, A. Gogala leg., PMSL

Škofi, VL07, 9. 6. 1991, 1♀, A. Gogala leg., PMSL

Vonarje, WM41, 8. 6. 1996, 1♀, A. Gogala leg., PMSL

Vremščica, VL26, 9. 5. 1992 on *Fagus*, 1♂, A. Gogala leg., PMSL

Sela na Krasu, UL97, 30. 4. 1995, 1♂, A. Gogala leg., PMSL

Komen, Vale, UL97, 26. 4. 1998, 1♂, A. Gogala leg., PMSL

Andrena wilkella* (Kirby, 1802)**Andrena xanthura* (Kirby, 1802)*****Andrena convexiuscula* (Kirby, 1802)**

Holarктиčna vrsta. V submediteranskem in preddinarskem območju Slovenije. Oligolektična, specializirana za Fabaceae. Univoltina, dejavna od maja do julija.

Holarctic species. In the sub-Mediterranean and pre-Dinaric regions of Slovenia. Oligolectic, specialized on Fabaceae. Univoltine, active from May to July.

GOGALA, 1991, 1994, 1999

Črnotiče, VL14, 8. 7. 1990, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 1. 6. 1991, 1♀, A. Gogala leg., 2. 6. 1991, 1♀, A. Gogala leg., 16. 6. 1991, 1♀, A. Gogala leg., PMSL

Učakovci, WL13, 26. 5. 1993, 1♀, A. Gogala leg., PMSL

Podgorje, VL14, 30. 5. 1993, 1♀, A. Gogala leg., PMSL

Trstelj, UL98, 18. 6. 2006 on *Genista sylvestris*, 1♀, A. Gogala leg., PMSL

Movraž, VL13, 3. 6. 1992, 1♂, A. Gogala leg., PMSL

Obrov, VL24, 21. 5. 1993, 1♂, A. Gogala leg., PMSL

Debeli rtič, UL94, 16. 5. 1995, 1♂, A. Gogala leg., PMSL

Padna, UL93, 16. 5. 1995, 1♂, A. Gogala leg., PMSL

Dol pri Ljubljani, ob Savi, VM70, 28. 7. 2006, 1♀, A. Gogala leg., PMSL



Slika / Figure 105: *Andrena aberrans* male from Čipnje, Sp. Branica, collected in May 1995.



Slika / Figure 106: *Andrena intermedia* male from Smolnik, Črni Vrh, collected in May 1996.



Slika / Figure 107: *Andrena lathyri* female on *Lathyrus linifolius*. Vel. Račna, Radensko polje, April 2009.



Slika / Figure 108: *Andrena ovatula* female from Rogla, Pohorje, collected in July 1993.



Slika / Figure 109: *Andrena producta* female on *Genista tinctoria*. Lukovica, Log, June 2007.



Slika / Figure 110: *Andrena similis* female from Slavnik, collected in May 1991.



Slika / Figure 111: *Andrena wilkella* female on *Genista sylvestris*. Trstelj, Kras, June 2006.

Subgenus *Tarsandrena* Osytshnjuk, 1984

Andrena tarsata Nylander, 1848

Boreomontanska vrsta. V Sloveniji na Korenskem sedlu v Karavankah (alpsko območje). Oligolektična, specializirana za rod *Potentilla* (Rosaceae). Univoltina, dejavna od junija do avgusta.

Boreo-montane species. In Slovenia on Korensko sedlo in the Karavanke Mts. (Alpine region). Oligolectic, specialized on *Potentilla* (Rosaceae). Univoltine, active from June to August.

GOGALA, 1994, 1999; VAN DER SMISSEN, 2010: 203—"Laibach" (= Ljubljana) Korensko sedlo, VM05, 23. 7. 1993, 1♀ 2♂, A. Gogala leg., PMSL



Slika / Figure 112: *Andrena tarsata* female from Korensko sedlo, Karavanke, collected in July 1993.

Subgenus *Thysandrena* Lanham, 1949

Andrena hypopolia Schmiedeknecht, 1883

Mediterranska vrsta. V Sloveniji le pri Koštaboni v Istri (submediteransko območje). Polilektična vrsta, ki obiskuje le Brassicaceae in Apiaceae. Bivoltina, dejavna maja in junija ter julija in avgusta.

Mediterranean species. In Slovenia only near Koštabona in Istria (sub-Mediterranean region). Polylectic species, visiting only Brassicaceae and Apiaceae. Bivoltine, active in May and June and in July and August.

GOGALA, 1994, 1999

Koštabona, Škrline, VL03, 29. 6. 1993 on *Sinapis*, 2♀, A. Gogala leg., PMSL



Slika / Figure 113: *Andrena hypopolia* female from Koštabona, Istria, collected in June 1993.

Subgenus *Trachandrena* Robertson, 1902***Andrena haemorrhoea*** (Fabricius, 1781)? *Apis sordida* Scopoli, 1763*Andrena albicans* auct.

Palaearktična vrsta, široko razširjena v Sloveniji.
Polilektska vrsta. Univoltina, dejavna od
marca do junija.

Palaearctic species, widely distributed in
Slovenia. Polylectic species. Univoltine, active
from March to June.

SCOPOLI, 1763 (?), GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 13. 4. 1931, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Mrzlica, WM01, 25. 6. 1991, 1♀, V. Furlan leg. (GOGALA, 1994)

Gorjansko, UL97, 11. 4. 1992, 1♀ 1♂, A. Gogala leg., PMSL

Pokojišče, VL48, 19. 5. 1993, 1♀, A. Gogala leg., PMSL

Predgrad, Laze, WL03, 12. 3. 1994, 1♀, A. Gogala leg., PMSL

Cerknica, Dol. Jezero, VL56, 9. 5. 1995, 1♀, A. Gogala leg., 25. 4. 1992, 1♂, A. Gogala leg., PMSL

Pokljuka: Mrzli studenec, VM23, 24. 5. 1996, 1♀, A. Gogala leg., PMSL

Dolsko, Senožeti, VM80, 3. 5. 2006 on *Taraxacum*, 1♀, A. Gogala leg., PMSL

Brje pri Komnu, VL07, 31. 3. 1991, 1♂, A. Gogala leg., 24. 3. 1991, 2♂, A. Gogala leg., PMSL

Log, Lukovica, VL59, 5. 4. 1991, 1♂, A. Gogala leg., PMSL

Preserje, Vrh, VL58, 7. 4. 1991, 2♂, A. Gogala leg., PMSL

Polhov Gradec, VM40, 8. 4. 1992, 1♂, A. Gogala leg., PMSL

Škocjan, VL25, 18. 4. 1992, 1♂, A. Gogala leg., PMSL

Vinje pri Moravčah, VM71, 3. 4. 1997, 1♂, A. Gogala leg., PMSL

Črni Vrh, Pasja ravan, VM40, 2. 6. 1993, 1♀, A. Gogala leg., PMSL

Preserje, Ponikve, VL58, 7. 4. 1991, 1♂, A. Gogala leg., PMSL

Vel. Bloke, VL67, 25. 4. 1992, 1♂, A. Gogala leg., PMSL

Kamniška Bistrica, VM63, 31. 3. 1994, 1♂, A. Gogala leg., PMSL

Bohinj: Ukanc, VM02, 24. 4. 1994, 1♂, A. Gogala leg., PMSL

Vel. Račna, Radensko polje, VL78, 9. 4. 2006, 1♂, A. Gogala leg., PMSL

Iški Vintgar, VL68, 21. 6. 2006 on *Aruncus dioicus*, 1♀, photo A. Gogala

Famlje, VL25, 18. 3. 1994, 1♀, A. Gogala vid.

Otočec, WL17, 27. 3. 1994 on *Taraxacum*, 1♂, A. Gogala vid.

Štatenberg, WM53, 7. 4. 1994, 1♀ 1♂, A. Gogala vid.

Sp. Brnik, VM61, 9. 4. 1994, 1♂, A. Gogala vid.

Gotenica, VL85, 25. 6. 1994, 1♀, A. Gogala vid.

Obrež, Grabe, WM93, 22. 4. 1995, 1♀, A. Gogala vid.

Beričevo, VM70, 18. 4. 1996, 1♀ 1♂, A. Gogala vid.

Pl. Vogar, VM12, 24. 5. 1996, 1♂, A. Gogala vid.

Krim, VL58, 25. 5. 1996, 1♀ 1♂, A. Gogala vid.

Planinsko polje: Laze, VL47, 15. 3. 1997 on *Salix*, 1♂, A. Gogala vid.

Vonarje, WM41, 9. 4. 1997, 1♀ 1♂, A. Gogala vid.

Rakov Škocjan, VL47, 6. 6. 1998, 1♀, A. Gogala vid.

Dobrova, Gabrje, VM50, 5. 4. 1999, 1♂, A. Gogala vid.

Črna vas, breg Iške, VL59, 8. 5. 1999 on *Salix*, 1♀, A. Gogala vid.

- Planina, Planinsko polje, VL47, 22. 4. 2000, 1♂, A. Gogala vid., 27. 5. 2010 on *Crataegus*, 1♀, photo A. Gogala
- Kranj, Brdo, VM52, 12. 9. 2007, 1♀, A. Gogala vid.
- Topol, Grmada, VM40, 4. 6. 2006, 1♀, A. Gogala vid.
- Dol pri Lj., ob Savi, VM70, 13. 6. 2006 on *Brassica*, 1♀, A. Gogala vid.
- Pivka, Vel. Drskovško jezero, VL45, 25. 4. 2009, 1♀, A. Gogala vid.
- Snežnik, VL54, 18. 6. 2009 on *Salix*, 1♀, A. Gogala vid., 30. 6. 2010, 1♀, A. Gogala vid., 1600 m, 14. 6. 2019 on *Apiaceae*, 1♀, A. Gogala leg., PMSL
- Lukovec, Robotnica, VL07, 24. 3. 2012, 1♀ 1♂ on *Prunus spinosa*, photo A. Gogala
- Tublje pri Komnu, VL07, 25. 3. 2017, 2♂ on *Prunus spinosa*, A. Gogala vid.
- Gorjansko, VL07, 2. 4. 2017, 1♀ on *Prunus mahaleb*, A. Gogala vid.
- Ig, ob Iščici, VL69, 8. 5. 2018, 1♀ on *Crataegus*, A. Gogala vid.
- Ig, Škrilje, Stražar, VL68, 31. 5. 2018, 1♀, A. Gogala vid.



Slika / Figure 114: *Andrena haemorrhoa*, a couple on *Prunus spinosa*. Robotnica, Lukovec, Kras, March 2012.

Subgenus *Truncandrena* Warncke, 1968

Andrena truncatilabris Morawitz, 1878

Mediterranska vrsta. V Sloveniji le v Strunjanu v Istri (submediteransko območje). Oligolektična, specializirana za Brassicaceae. Univoltina, dejavna maja in junija.

Mediterranean species. In Slovenia only at Strunjan, Istria (sub-Mediterranean region). Oligolectic, specialized on Brassicaceae. Univoltine, active in May and June.

GOGALA, 1999

Strunjan, UL94, 26. 5. 1994 on *Brassica*, 2♀ 1♂, A. Gogala leg., 7. 6. 1994, 1♀, A. Gogala leg., PMSL

Andrena tscheki Morawitz, 1872

Andrena nigrifrons Smith, 1853

Severnomediteranska vrsta. Razširjena v submediteranskem, dinarskem in subpanonskem območju Slovenije. Oligolektična, specializirana za Brassicaceae. Univoltina, dejavna od marca do maja.

North Mediterranean species. Distributed in the sub-Mediterranean, Dinaric and sub-Pannonian regions of Slovenia. Oligolectic, specialized on Brassicaceae. Univoltine, active from March to May.

GRÄFFE, 1892: Lipica, 5.; VOGRIN, 1955: Podčetrtek, 1. 4.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 10. 4. 1933, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Slavnik, VL14, 26. 3. 1977, 1♀, V. Furlan leg., PMSL



Slika / Figure 115: *Andrena truncatilabris* female from Strunjan, Istria, collected in June 1994.

- Brje pri Komnu, VL07, 24. 3. 1991, 1♀ 3♂, A. Gogala leg., PMSL, 22. 3. 1992 on *Thlaspi praecox*, 1♂, photo A. Gogala
- Trstelj, UL97, 10. 4. 1991, 1♀, A. Gogala leg., PMSL, 22. 3. 2009, 2♂, A. Gogala vid.
- Lipa, UL97, 10. 4. 1991, 1♀, A. Gogala leg., PMSL
- Škocjan, VL25, 18. 4. 1992, 1♀, A. Gogala leg., PMSL
- Rakitovec, Kavčič, VL13, 28. 4. 2001, 1♀, A. Gogala leg., PMSL
- Gorjansko, UL97, 15. 3. 1992, 1♂, A. Gogala leg., PMSL
- Dolina Raše: Griže, VL16, 21. 3. 1992, 1♂, A. Gogala leg., PMSL
- Dragonja, Stena, UL93, 24. 3. 1995, 1♂, A. Gogala leg., PMSL, 2. 4. 2005 on *Thlaspi*, 1♀, A. Gogala vid.
- Gorjansko, Vale, UL97, 9. 4. 2000 on *Thlaspi praecox*, 1♀, photo A. Gogala
- Famlje, VL25, 18. 3. 1994, 1♂, A. Gogala vid.
- Brestovica, UL97, 11. 3. 1995, 1♂, A. Gogala vid.
- Obrež, Grabe, WM93, 22. 4. 1995, 1♂, A. Gogala vid.
- Gaberje, Koboli, VL17, 1. 5. 1995, 1♀, A. Gogala vid.
- Lužarji, VL67, 1. 5. 1999 on *Thlaspi*, 1♀, A. Gogala vid.
- Tublje pri Komnu, VL07, 30. 3. 2008, 1♀, A. Gogala vid., 3. 4. 2016, 1♀, A. Gogala vid.
- Zanigrad, VL14, 7. 4. 2009, 1♀, A. Gogala vid., 2. 4. 2011 on *Thlaspi praecox*, 1♀, photo A. Gogala
- Pivka, Parje, VL35, 25. 4. 2009, 1♀, A. Gogala vid.
- Podpeč, VL14, 3. 4. 2010 on *Brassica*, 1♀, A. Gogala vid.
- Veliki Dol, VL07, 25. 3. 2017, 1♀ on *Thlaspi praecox*, A. Gogala vid.
- Škofi, VL07, 25. 3. 2017, 1♀ on *Thlaspi praecox*, A. Gogala vid., 2. 4. 2018, 1♀ on *Thlaspi praecox*, A. Gogala vid.
- Vel. Račna, Radensko polje, VL78, 28. 3. 2017, 1♀ on *Cardamine pratensis*, A. Gogala vid.
- Podgorje, VL14, 1. 4. 2017, 1♀ 1♂, A. Gogala vid.
- Hrastovlje, VL14, 30. 3. 2019, 1♀ on *Alyssum*, A. Gogala vid.



Slika / Figure 116: *Andrena tscheki* female on *Thlaspi praecox*. Zanigrad, Istria, April 2011.

Subgenus *Ulandrena* Warncke, 1968*Andrena elegans* Giraud, 1863

Pontska vrsta. Dejavna od aprila do junija Pontic species. Active from April to June
(OSYTSHNJUK, 1977). (OSYTSHNJUK, 1977).

1 female, 1.-15.6.1963, „Piran. Jugosl.“, leg. J. Heinrich, det. Dr. Warncke, coll. E. Scheuchl (ex coll. Grünwaldt, maybe more specimens in Zool. Staatssammlung München)

Subgenus *Zonandrena* Hedicke, 1933*Andrena chrysopyga* Schenck, 1853

Zahodnopalearktična vrsta. Polilektična in West Palaearctic species. Polylectic and
univoltina, dejavna od aprila do junija. univoltine, active from April to June.

MOCSÁRY, 1897: 95—"Kapornak" (= Krplivnik); ZANDIGIACOMO & al., 2013: 109—"Lippiza (= Lipica), 1♀ (NHM, coll. Gräffe), Salcano (= Solkan), 5♀ 19.VII.1911 (leg. Maidl), Pirano (= Piran), 1♀1♂ 14.VII.1911 (leg. Maidl)".

Andrena flavipes Panzer, 1799*Andrena fulvicrus* (Kirby, 1802)

Zahodnopalearktična vrsta, široko razširjena v West Palaearctic species, widely distributed in
Sloveniji. Polilektična vrsta. Bivoltina, dejavna Slovenia. Polylectic species. Bivoltine, active
od marca do maja ter od junija do septembra. from March to May and from June to September.
Primerki, najdeni v Istri oktobra, so verjetno Specimens found in Istria in October prob-
prišli na dan prezgodaj zaradi toplega jesen- ably emerged earlier due to the warm autumn
skega vremena. weather.

GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 14. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)

Prekmurje: Gančani, WM96, 10. 6. 1993, 1♂, S. Gomboc leg. (GOGALA, 1994)

Brje pri Komnu, VL07, 2. 6. 1991, 1♀, A. Gogala leg., PMSL

Log, Lukovica, VL59, 21. 4. 1992, 1♀, A. Gogala leg., 28. 4. 1992, 1♂, A. Gogala leg., PMSL, 19.

3. 2005, 1♂, photo A. Gogala

Ljubljana, Črnuče, VM60, 15. 6. 1993, 1♀, A. Gogala leg., PMSL

Sočerga, Veli Badin, VL13, 10. 10. 1993, 1♀ 1♂, A. Gogala leg., PMSL

Petanjci, WM86, 9. 4. 1995, 1♀, A. Gogala leg., PMSL

Trstelj, UL97, 10. 4. 1991, 2♂, A. Gogala leg., PMSL

Vremščica, VL26, 9. 5. 1992, 2♂, A. Gogala leg., PMSL

Koštabona, Škrline, VL03, 5. 3. 1994 on *Salix*, 1♂, A. Gogala leg., PMSL

Topolovec, VL03, 9. 5. 1991, 1♀, A. Gogala leg., PMSL

M. Žablje, VL18, 23. 5. 1993, 1♀, A. Gogala leg., PMSL

Dobova, Mihalovec, WL58, 27. 3. 1994, 1♂, A. Gogala leg., PMSL
Strunjan, UL94, 17. 4. 1995, 1♂, A. Gogala leg., PMSL, 7. 5. 2009 on *Cotinus coggygria*, 1♀, photo
A. Gogala
Dobrnica, VL98, 7. 5. 1994, 1♂, A. Gogala vid.
Kostanjevica na Krki, WL37, 13. 5. 1994, 1♀1♂, A. Gogala vid.
Padna, UL93, 17. 4. 1995, 1♀, A. Gogala vid.
Obrež, Grabe, WM93, 22. 4. 1995, 1♂, A. Gogala vid.
Borl, WM73, 22. 4. 1995, 1♂, A. Gogala vid.
Muriša, XM14, 16. 7. 1995, 1♀1♂, A. Gogala vid.
Dragonja, UL93, 7. 3. 1997 on *Salix*, 1♂, A. Gogala vid.
Koper, Bertoki, Škocjanski zatok, VL04, 6. 5. 2000, 1♀, A. Gogala vid.
Lukovec, Golec, VL07, 18. 6. 2016, 1♀ on *Achillea*, A. Gogala vid.

Andrena gravida Imhoff, 1832

Andrena extricatus Smith, 1849

Evropska vrsta, široko razširjena v Sloveniji. European species, widely distributed in Slovenia. Polilektična vrsta. Univoltina, dejavna od Polylectic species. Univoltine, active from March to May. marca do maja.

VOGRIN, 1955: Podčetrtak, 30. 3., 19. – 26. 4., 3. 5.; GOGALA, 1991, 1994, 1999
Podčetrtak, WM41, 10. 4. 1934, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)
Brje pri Komnu, VL07, 24. 3. 1991, 1♀, A. Gogala leg., 31. 3. 1991, 1♀, A. Gogala leg., 10. 4. 1991, 1♂, A. Gogala leg., 12. 4. 1992, 1♂, A. Gogala leg., 20. 3. 2016, 1♂ on *Muscari*, A. Gogala leg., PMSL, 24. 3. 2019, 1♀, A. Gogala vid.
Slavnik, VL14, 22. 5. 1991, 1♀, A. Gogala leg., PMSL
Veliki Dol, VL07, 22. 3. 1992, 1♀, A. Gogala leg., PMSL
Kostel, Fara, VL93, 12. 3. 1994, 1♀, A. Gogala leg., PMSL
Gorjansko, UL97, 11. 4. 1992, 1♂, A. Gogala leg., PMSL
Podpeč, VL59, 19. 3. 1992, 1♂, A. Gogala leg., PMSL
Famlje, VL25, 18. 3. 1994, 1♂, A. Gogala leg., PMSL
Kum: Lontovž, WM00, 8. 5. 1998, 1♂, A. Gogala leg., PMSL
Pokojišče, VL48, 19. 5. 1993, 2♀, A. Gogala leg., PMSL
Dolsko, Senožeti, VM80, 3. 5. 2006, 1♀, A. Gogala leg., PMSL, 16. 4. 2008 on *Taraxacum*, 1♀, photo A. Gogala, 19. 4. 2018, 1♀, A. Gogala vid.
Vremščica, VL26, 9. 5. 1992, 2♂, A. Gogala leg., PMSL
Melinci, WM96, 9. 4. 1995, 1♂, A. Gogala leg., PMSL
Vinje pri Moravčah, VM71, 3. 4. 1997, 1♂, A. Gogala leg., PMSL, 17. 5. 1997 on *Taraxacum*, 1♀, A. Gogala vid.
Log, Lukovica, VL59, 24. 4. 1993, 1♂, A. Gogala leg., PMSL
Vikrče, VM51, 15. 5. 1938, 1♀, M. Hafner leg., PMSL
Koritnice, Podboršt, VL45, 4. 4. 1994, 1♂, S. Polak leg., det. A. Gogala
Črni Vrh, Pasja ravan, VM40, 30. 3. 1994 on *Salix*, 1♀, A. Gogala vid.
Kamniška Bistrica, VM63, 31. 3. 1994, 1♂, A. Gogala vid.
Bohinjska Bistrica, Brod, VM12, 24. 4. 1994 on *Salix*, 1♂, A. Gogala vid.
Obrež, Grabe, WM93, 22. 4. 1995, 1♀ 1♂, A. Gogala vid.
Borl, WM73, 22. 4. 1995, 1♂, A. Gogala vid.

Vonarje, WM41, 9. 4. 1997, 1♀, A. Gogala vid.
 Dobrova, Gabrje, VM50, 5. 4. 1999, 1♂, A. Gogala vid.
 Planina, Planinsko polje, VL47, 22. 4. 2000, 1♂, A. Gogala vid.
 Ig, Kremenica, VL68, 1. 4. 2008, 1♀, A. Gogala vid.
 Štanjel, Lukovec, Rabotnica, VL07, 28. 4. 2018, 1♂, A. Gogala leg., PMSL

***Andrena korleviciana* Friese, 1887**

Balkansko apeninska vrsta, razširjena v submediteranskem in preddinarskem območju Slovenije. Polilektična vrsta (lastna opazovanja). Univoltina, dejavna od aprila do junija. Samice vrste *Andrena korleviciana* so podobne vrsti *A. chrysopyga*, oboje imajo svetle dlake na končnih tergih. A njihova zadnja stegna so brez rebra na zunanji strani, ki ga ima vrsta *A. chrysopyga*. Barva večine dlak je zlato rumena (bela pri *A. chrysopyga*). Najdemo jo v določevalnem ključu Dylewske (DYLEWSKA, 1987).

Balkan-Apeninic species, distributed in the sub-Mediterranean and pre-Dinaric regions of Slovenia. Polylectic species (pers. obs.). Univoltine, active from April to June.

Andrena korleviciana female is similar to *A. chrysopyga*, both have light coloured hairs on the terminal terga. But its hind femora are without a lamella on the outer side, which is present in *A. chrysopyga*. The colour of most of its hairs is golden yellow (white in *A. chrysopyga*). It appears in the determination key by DYLEWSKA (1987).

GOGALA, 1991, 1994, 1999

Kregolišče, VL07, 9. 6. 1991, 1♀, A. Gogala leg., 2. 5. 1992, 2♂, A. Gogala leg., PMSL
 Brje pri Komnu, VL07, 16. 6. 1991, 1♀, A. Gogala leg., 2. 5. 1992, 1♂, A. Gogala leg., 25. 4. 1993, 1♂, A. Gogala leg., PMSL
 Gorjansko, UL97, 27. 4. 1992, 1♀, A. Gogala leg., PMSL
 Stari trg ob Kolpi, WL03, 26. 5. 1993, 1♀, A. Gogala leg., PMSL
 Škocjan, Famlje, VL25, 16. 6. 1993, 1♀, A. Gogala leg., PMSL
 Movraž, VL13, 9. 5. 1991, 1♂, A. Gogala leg., PMSL
 Rakitovec, VL13, 3. 6. 1992, 1♂, A. Gogala leg., PMSL



Slika / Figure 117: *Andrena flavipes* female on *Cotinus coggygria*. Strunjan, Istria, May 2009.



Slika / Figure 118: *Andrena gravida* female. Senožeti, Dol pri Ljubljani, April 2008.



Slika / Figure 119: *Andrena korleviciana* female from Kregolišče, Kras, collected in June 1991.

Panurginae

Genus *Panurgus* Panzer, 1806

Panurgus banksianus (Kirby, 1802)

Evropska vrsta. V alpskem, predalpskem, dinarskem in submediteranskem (Nanos) območju Slovenije. Oligolektična, specializirana za Asteraceae Cichorioideae. Univoltina, dejavna od junija do avgusta.

European species. In the Alpine, pre-Alpine, Dinaric and sub-Mediterranean (Mt. Nanos) regions of Slovenia. Oligolectic, specialized on Asteraceae Cichorioideae. Univoltine, active from June to August.

GOGALA, 1991, 1994, 1999

Olševa, 1700 m, VM74, 27. 7. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 24. 7. 1991, 1♀, A. Gogala leg., PMSL

Nanos: Pleša, VL27, 25. 7. 1992, 1♀ 1♂, A. Gogala leg., PMSL

Topol, Grmada, VM40, 1. 8. 1993, 1♀, A. Gogala leg., PMSL

Golica, VM24, 28. 7. 1994, 1♀, A. Gogala leg., PMSL

Krvavec, Dolge njive, VM63, 29. 7. 1992, 1♂, A. Gogala leg., PMSL

Ljubljana, Črnuče, VM60, 4. 7. 1993, 1♂, A. Gogala leg., PMSL

Korensko sedlo, VM05, 23. 7. 1993, 1♂, A. Gogala leg., PMSL

Olševa, VM74, 12. 8. 1993, 1♂, A. Gogala leg., PMSL

Stara Fužina, VM12, 7. 7. 1995, 1♂, A. Gogala leg., PMSL

Mali Kum, WM00, 26. 7. 1996, 1♂, A. Gogala leg., PMSL

Krma, VM14, 10. 8. 1994, 1♀, A. Gogala vid.

Zaplana, VL39, 23. 7. 1999, 1♀ 1♂, A. Gogala vid.

Krvava peč, Bukovec, VL67, 4. 8. 1999, 1♂, A. Gogala vid.

Kranj, Brdo, VM52, 12. 7. 2007, 1♀, A. Gogala vid.

Snežnik, 1600 m, VL54, 2. 8. 2008, 1♀, A. Gogala vid.

Planina pod Golico, VM24, 21. 7. 2010 on *Leontodon* and the nest aggregation, 2♀ 4♂, photo A. Gogala

Panurgus calcaratus (Scopoli, 1763)

Panurgus lobatus (Panzer, 1799)

Zahodnopalearktična vrsta, široko razširjena v Sloveniji. Oligolektična, specializirana za Asteraceae, najraje obiskuje Cichorioideae. Komunska vrsta. Univoltina, dejavna od julija do septembra.

West Palaearctic species, widely distributed in Slovenia. Oligolectic, specialized on Asteraceae, with preference for Cichorioideae. Communal species. Univoltine, active from July to September.

SCOPOLI, 1763: Idrija (*Circa Idriam capta*)

GRÄFFE, 1892: Lipica, 6.; GRAEFFE, 1902: Tolmin, 7. – 8.; GOGALA, 1991, 1994, 1999

Podčetrtek, WM41, 23. 8. 1932, 1♂, E. Jaeger leg., PMSL (GOGALA, 1994)

Log, Lukovica, VL59, 13. 8. 1991, 1♀, A. Gogala leg., 30. 7. 1991, 1♂, A. Gogala leg., 13. 8. 1991,

1♂, A. Gogala leg., PMSL, Liparjev grič, 27. 7. 2004 on *Leontodon*, 1♂, photo A. Gogala, 16. 7. 2010, 1♂, A. Gogala vid.

Nanos: Sv. Hieronim, VL27, 25. 7. 1992, 1♀, A. Gogala leg., PMSL
 Črni Vrh, Pasja ravan, VM40, 14. 8. 1996, 1♀, A. Gogala leg., PMSL
 Gradišče pri Lukovici, VM71, 23. 8. 1996, 1♀, A. Gogala leg., PMSL
 Javorniki: Sv. Trojica, 1090 m, 4. 8. 2007, 1♀, A. Gogala leg., PMSL
 Ilirska Bistrica, Štanga, VL44, 22. 7. 1992, 1♂, A. Gogala leg., PMSL
 Kobarid, Idrsko, UM92, 14. 8. 1993, 1♂, A. Gogala leg., PMSL
 Bohinj: Ukanc, VM02, 23. 7. 1994, 1♂, A. Gogala leg., PMSL
 Golica, VM25, 28. 7. 1994, 1♂, A. Gogala leg., PMSL
 Petišovci, XM15, 4. 8. 1995, 1♂, A. Gogala leg., PMSL
 Krško, Anovec, WL49, 1. 8. 1996, 1♂, A. Gogala leg., PMSL
 Dolsko, Križevska vas, VM70, 22. 8. 2006, 1♂, A. Gogala leg., PMSL
 Bohinj: Ribčev Laz, VM12, 7. 1930, 1♂, M. Hafner leg., 26. 7. 1934, 1♂, M. Hafner leg., PMSL
 Rakov Škocjan, VL47, 15. 7. 2006, 1♀, photo A. Gogala
 Vel. Račna, Radensko polje, VL78, 20. 7. 2008 on *Leontodon*, 1♀, photo A. Gogala
 Kranj, Brdo, VM52, 12. 7. 2007, 1♀, A. Gogala vid.
 Topol, Sv. Katarina, VM50, 19. 7. 2010, 1♀, A. Gogala vid.
 Podsreda, Veternik, WM40, 28. 6. 2013, 1♂, A. Gogala vid.
 Log pri Brezovici, Lj. barje, VL59, 6. 8. 2016, 1♀, A. Gogala vid.

Panurgus dentipes Latreille, 1811

Zahodnoevropska vrsta. ZANDIGIACOMO in sod. (2013) poročajo o eni samici iz Tolmina v zbirki E. Gräffeja na Dunaju. Glede na znano razširjenost te vrste (PATINY, 2012) je lokaliteta dvomljiva, a ne nemogoča. Oligolektična vrsta, specializirana za Asteraceae, najraje obiskuje Cichorioideae. Univoltina, dejavna od junija do septembra.

West European species. ZANDIGIACOMO et al. (2013) report on one female from Tolmin in the collection of E. Gräffe in Vienna. According to the known distribution of this species (PATINY, 2012), the locality is doubtful, albeit not impossible. Oligolectic species, specialized on Asteraceae, with preference for Cichorioideae. Univoltine, active from June to September.

ZANDIGIACOMO et al., 2013: Tolmin, 1♀, coll. Gräffe (Vienna)



Slika / Figure 120: *Panurgus banksianus* female from Golica, Karavanke, collected in July 1994.



Slika / Figure 121: *Panurgus calcaratus* female on *Leontodon*. Radensko polje, Velika Račna, July 2008.

Genus *Camptopoeum* Spinola, 1843

Camptopoeum frontale (Fabricius, 1804)

Vzhodnomediterska vrsta, znana po enem primerku iz subpanonskega območja Slovenije. Oligolektična, specializirana za Asteraceae Carduoideae. Univoltina, dejavna julija in avgusta.

East Mediterranean species, known by a single find in the sub-Pannonian region of Slovenia. Oligolectic, specialized on Asteraceae Carduoideae. Univoltine, active in July and August.

GOGALA, 1994, 1999

Podčetrtek, OL – Olimlje, WM41, 15. 7. 1945, 1♀, E. Jaeger leg., PMSL (GOGALA, 1994)



Slika / Figure 122: *Camptopoeum frontale* female from Olimlje, Podčetrtek, collected in July 1945.



Slika / Figure 123: *Camptopoeum frontale* female, left: face, right: tip of the abdomen with the pygidial plate.

Genus *Melitturga* Latreille, 1809

Melitturga clavicornis (Latreille, 1806)

Evrosibirska vrsta, znana po enem primerku, najdenem v subpanonskem območju Slovenije. Oligolektična, specializirana za Fabaceae, najraje obiskuje rod *Medicago*. Univoltina, dejavna od junija do avgusta.

Eurosiberian species, known by a single find in the sub-Pannonian region of Slovenia. Oligolectic, specialized on Fabaceae, with preference for *Medicago*. Univoltine, active from June to August.

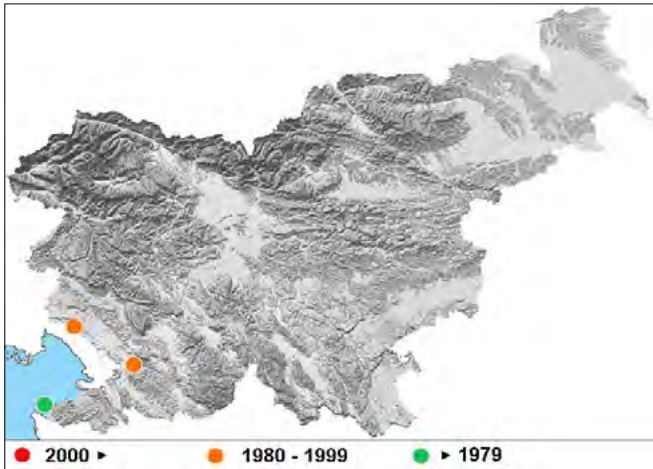
Gogala, 1994, 1999, 2018b

Maribor (Marburg), WM55, 12. 7. 1921, 1♂, E. Jaeger leg., PMSL (Gogala, 1994)

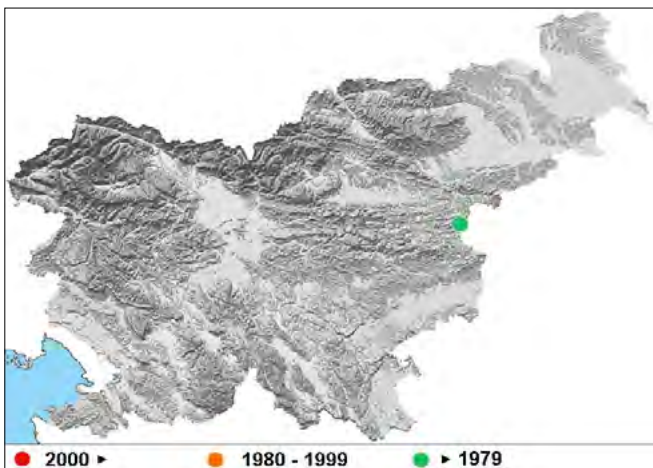
Karte razširjenosti / Distribution maps

Najdbe peščinskih čebel v Sloveniji. Najdbe do leta 1979 so označene z zeleno, od 1980 do 1999 z oranžno in od 2000 naprej z rdečo barvo.

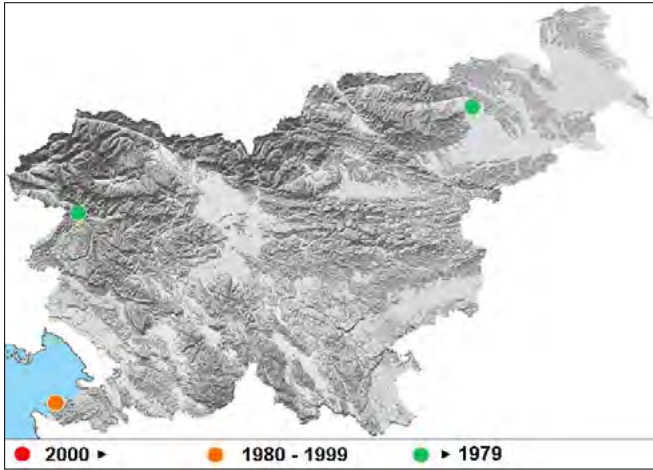
Records of Andrenid bees in Slovenia. Records up to 1979 are marked with green, from 1980 to 1999 with orange and from 2000 onwards with red colours.



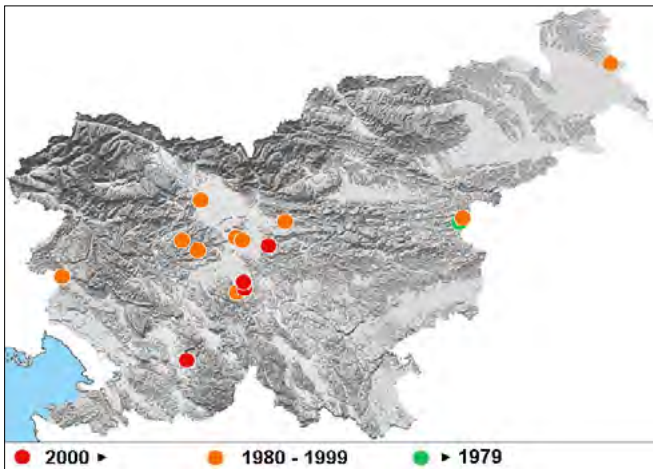
Andrena aeneiventris
Morawitz, 1872



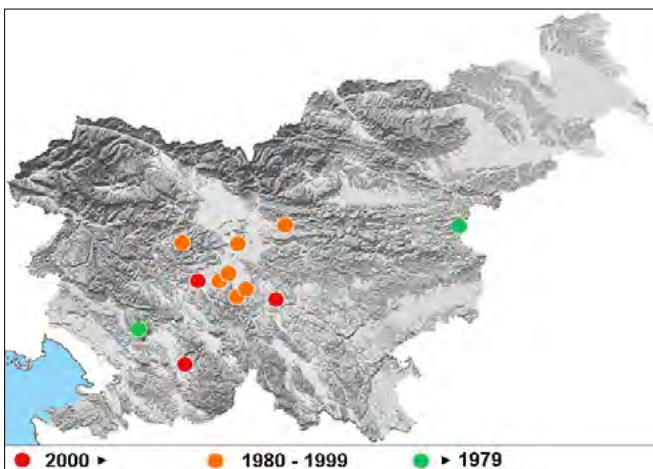
Andrena hedikae Jaeger, 1934



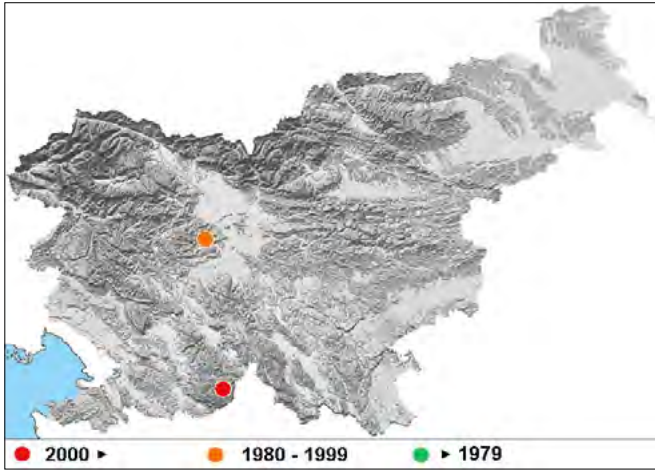
Andrena agilissima (Scopoli, 1770)



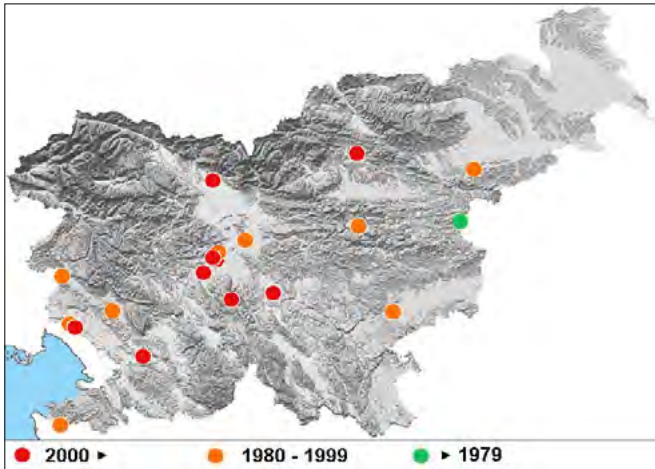
Andrena apicata Smith, 1847



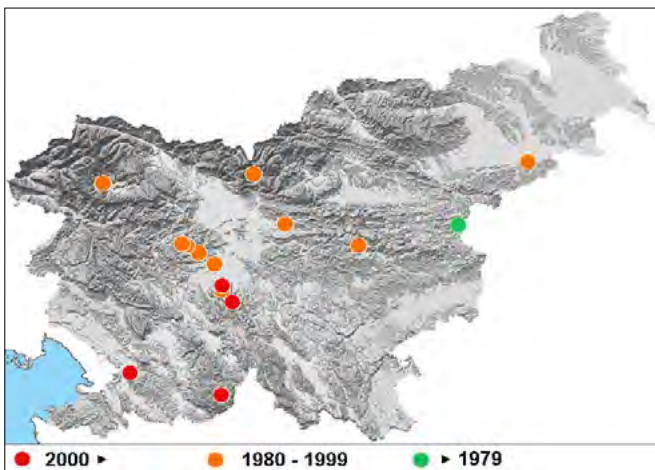
Andrena clarkella (Kirby, 1802)



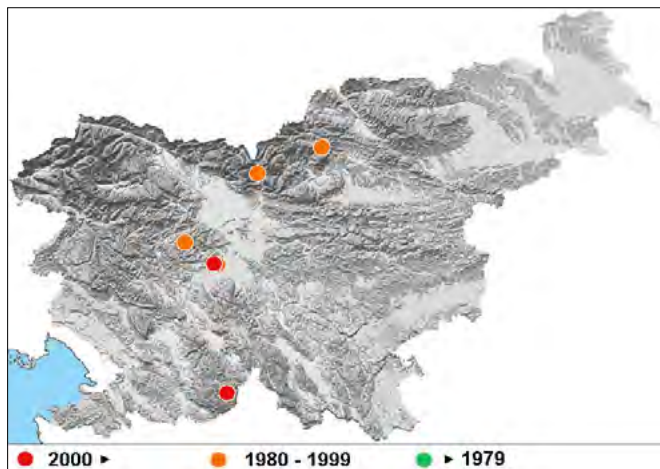
Andrena fucata Smith, 1847



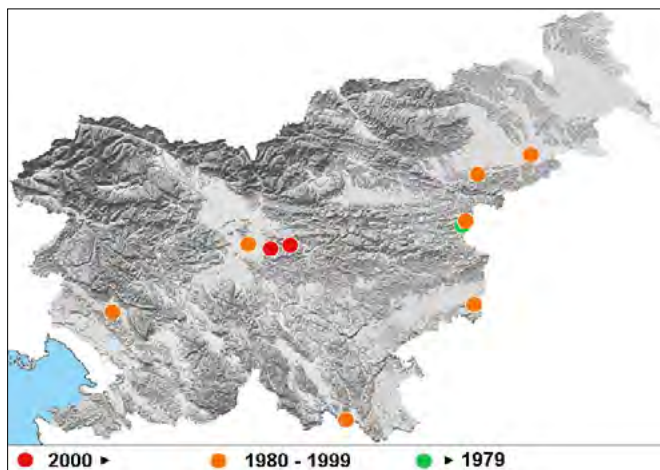
Andrena fulva (Müller, 1766)



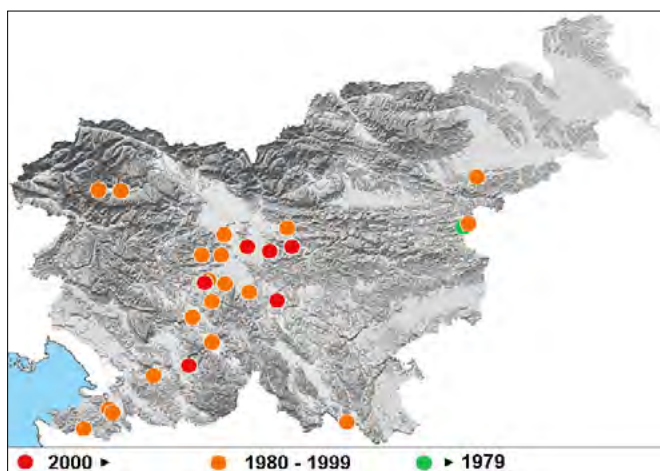
Andrena helvola (Linnaeus, 1758)



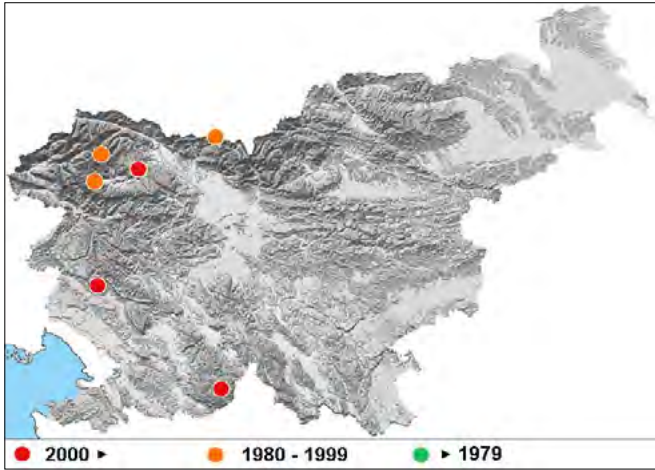
Andrena lapponica Zetterstedt, 1838



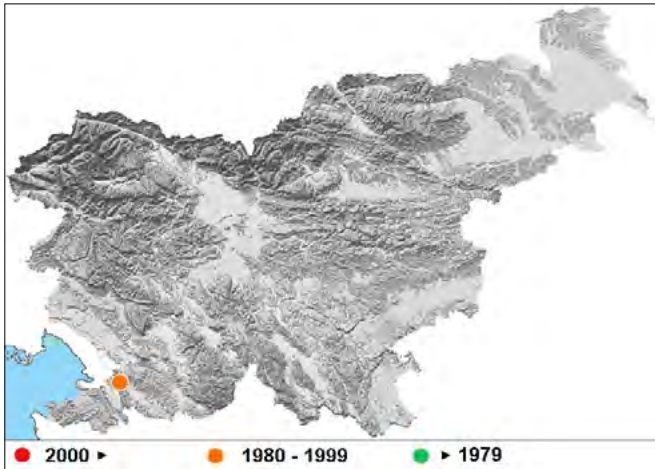
Andrena mitis Schmiedeknecht, 1883



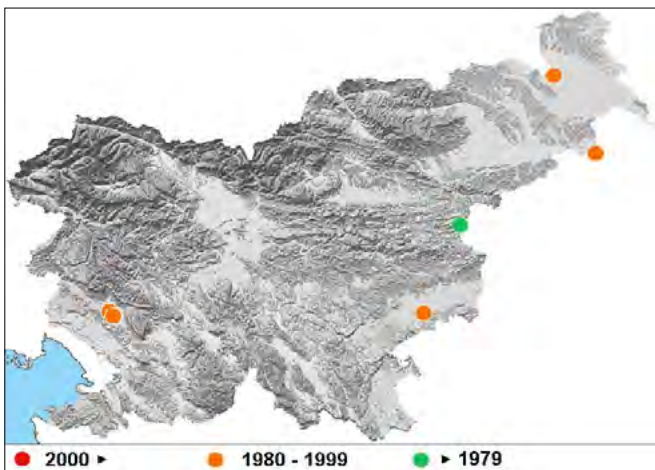
Andrena praecox (Scopoli, 1763)



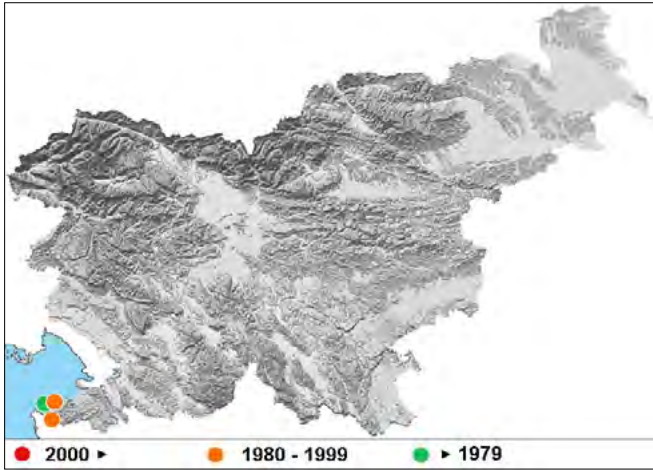
Andrena rogenhoferi Morawitz, 1872



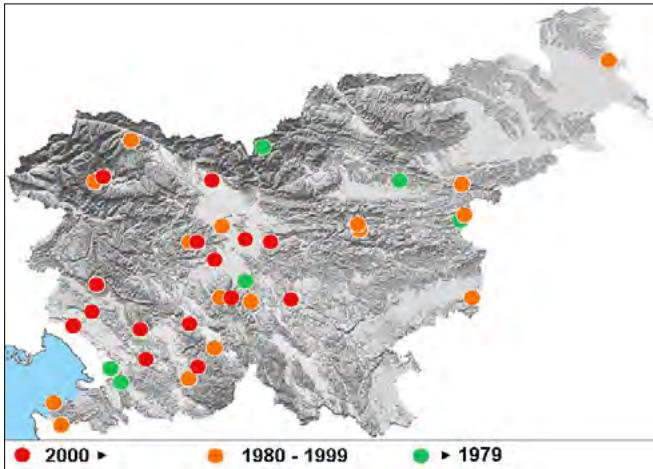
Andrena varians (Rossi 1792)



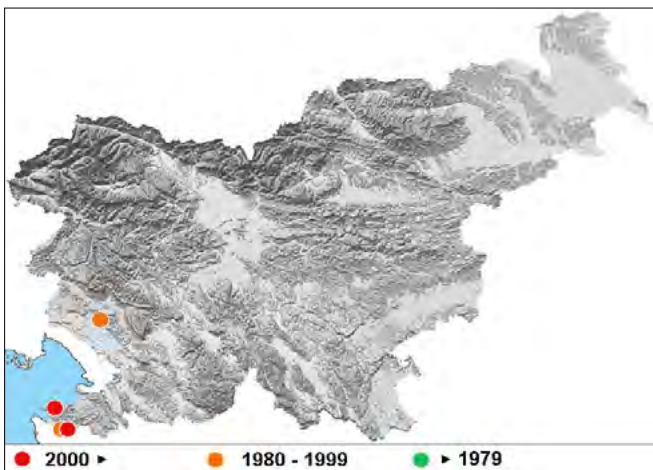
Andrena lagopus Latreille, 1809



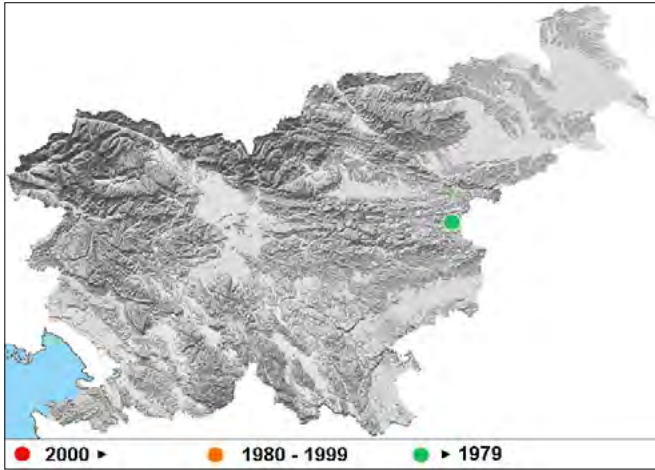
Andrena colletiformis
Morawitz, 1874



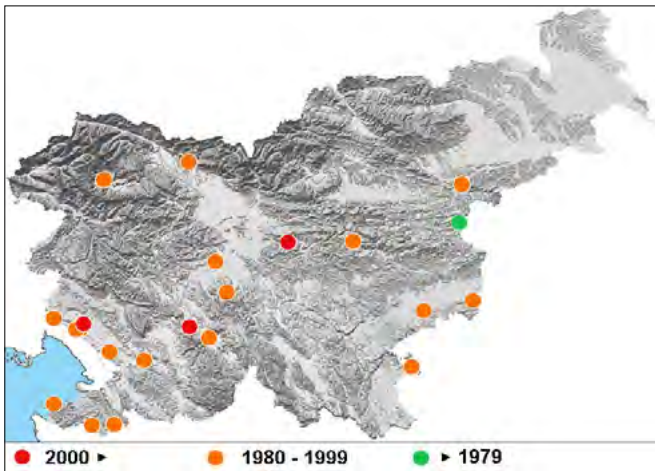
Andrena hattorfiana
(Fabricius, 1775)



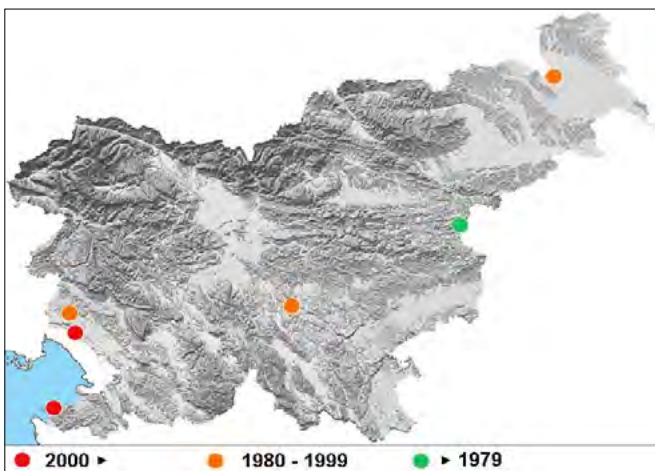
Andrena agnata Warncke, 1967



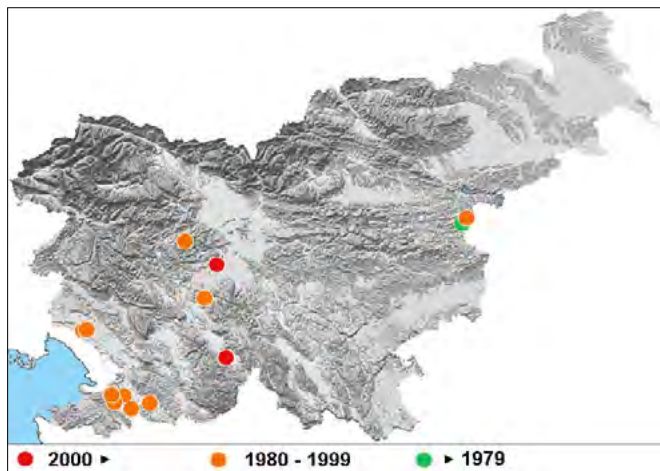
Andrena clypella Strand, 1921



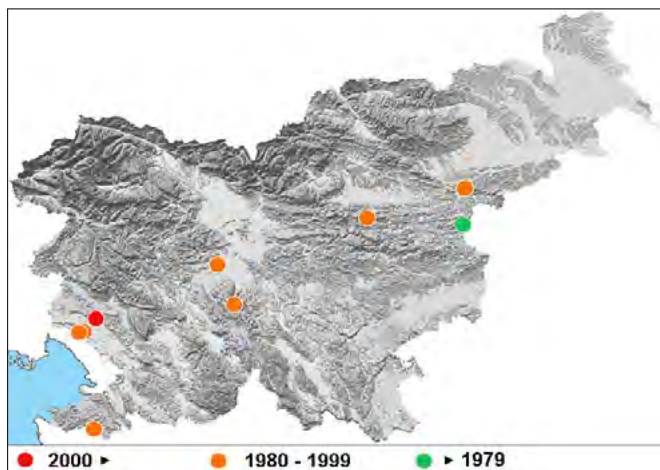
Andrena humilis Imhoff, 1832



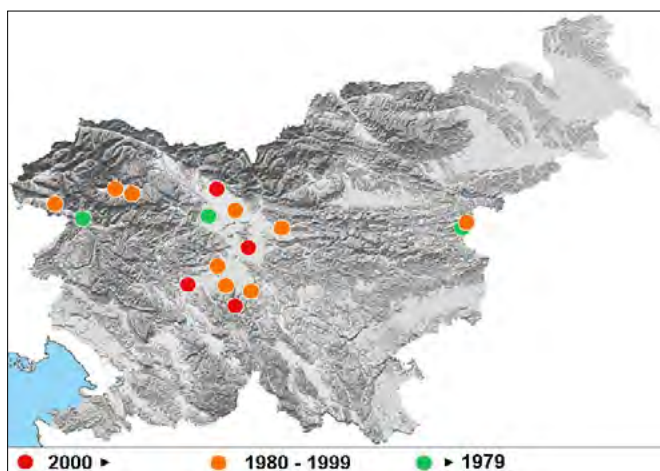
Andrena taraxaci Giraud, 1861



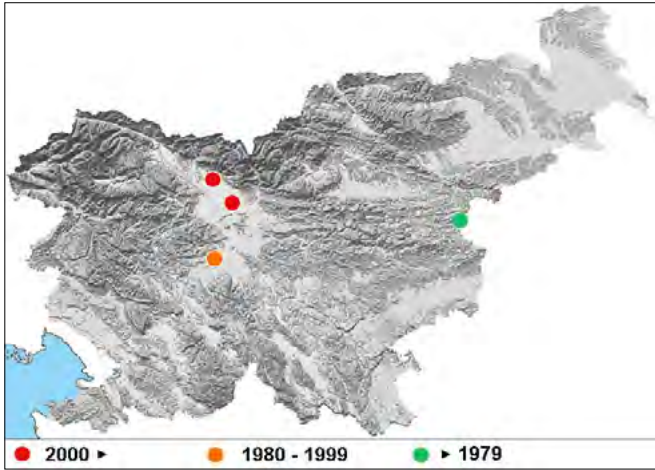
Andrena fulvago (Christ, 1791)



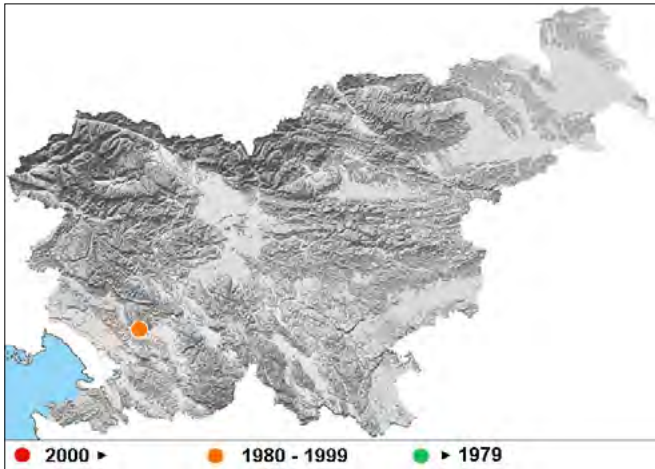
Andrena hesperia Smith, 1853



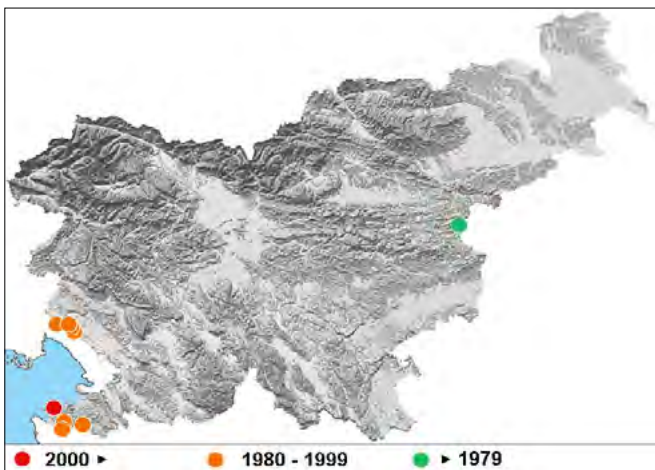
Andrena denticulata (Kirby, 1802)



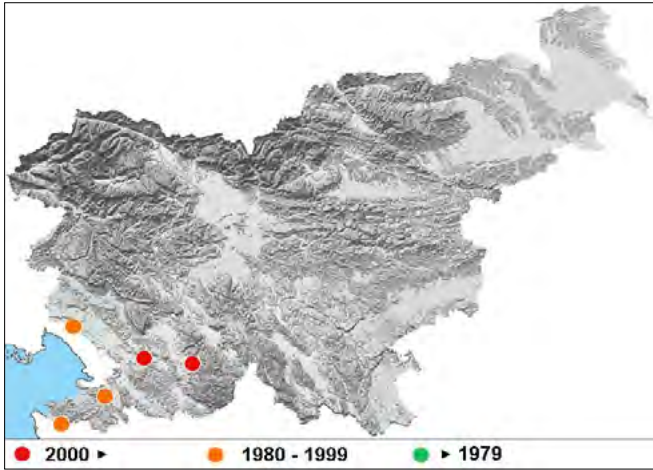
Andrena fuscipes (Kirby, 1802)



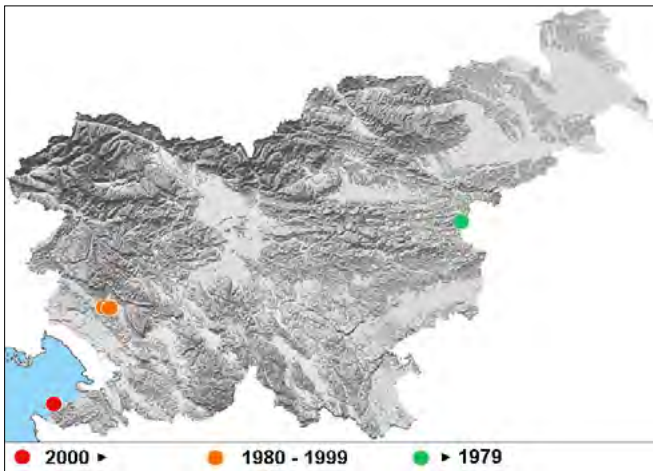
Andrena nigriceps (Kirby, 1802)



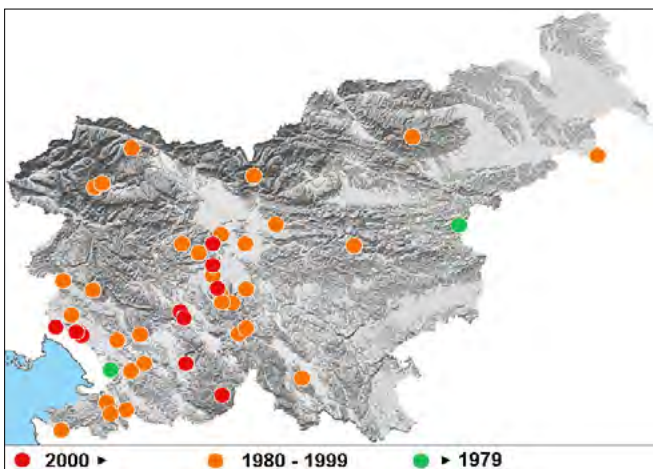
Andrena ventricosa Dours, 1873



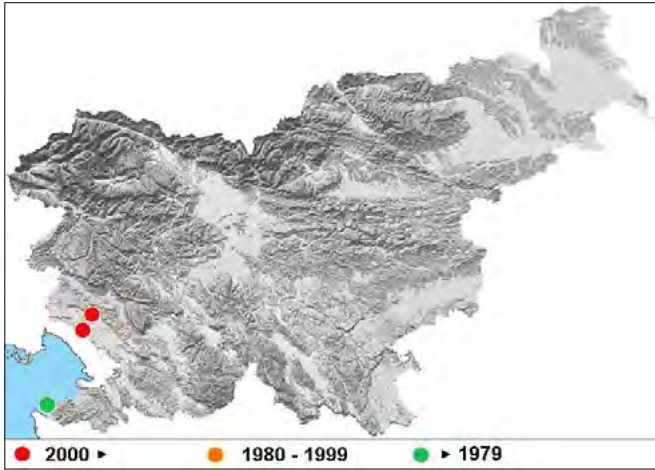
Andrena mucida Kriechbaumer, 1873



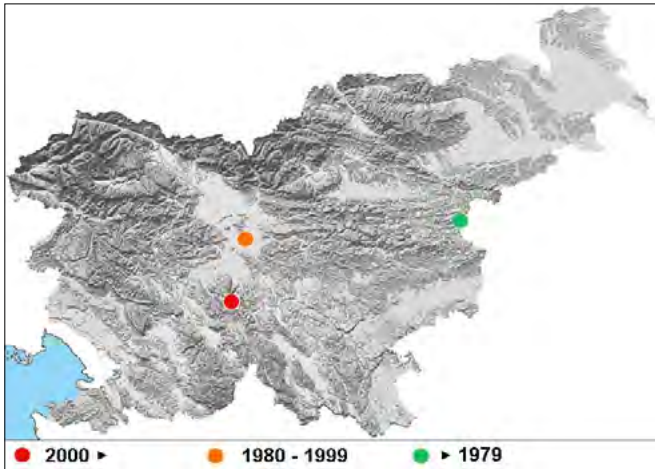
Andrena distinguenda Schenck, 1871



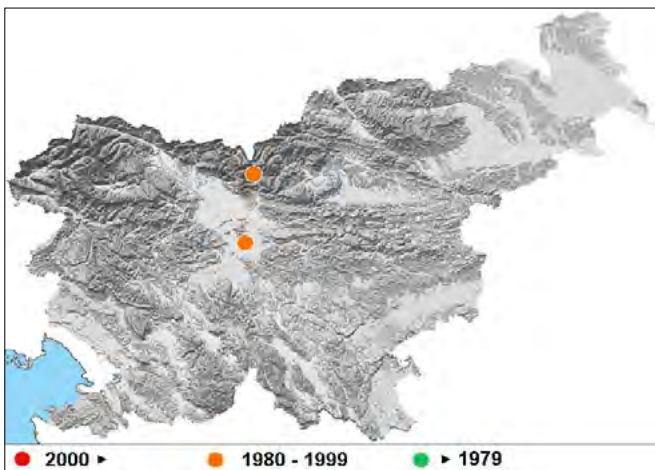
Andrena bicolor Fabricius, 1775



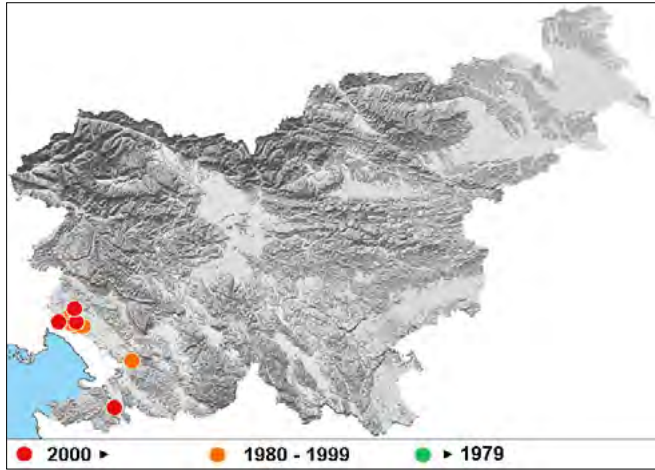
Andrena chrysopus Pérez, 1903



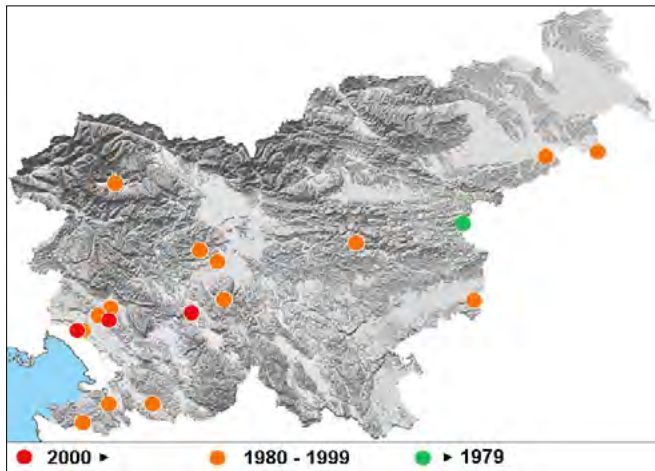
Andrena fulvida Schenck, 1853



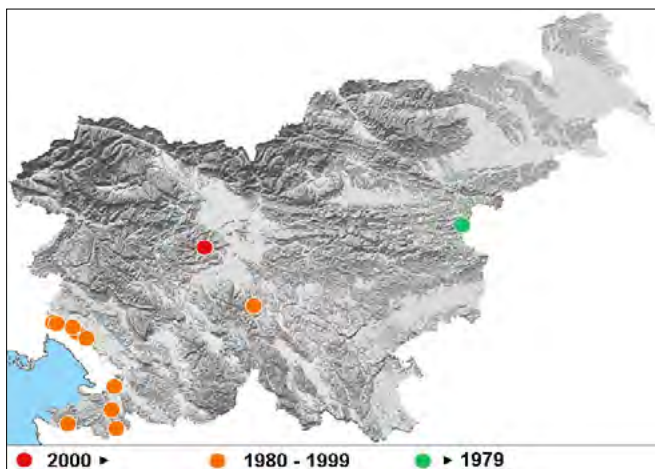
Andrena ruficrus Nylander, 1848



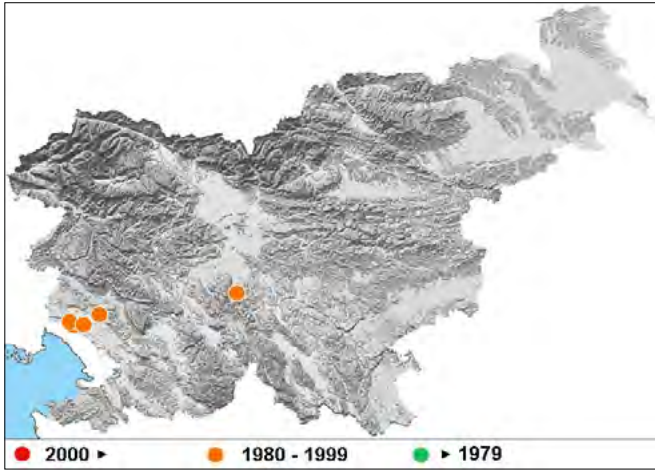
Andrena rufula
Schmiedeknecht, 1883



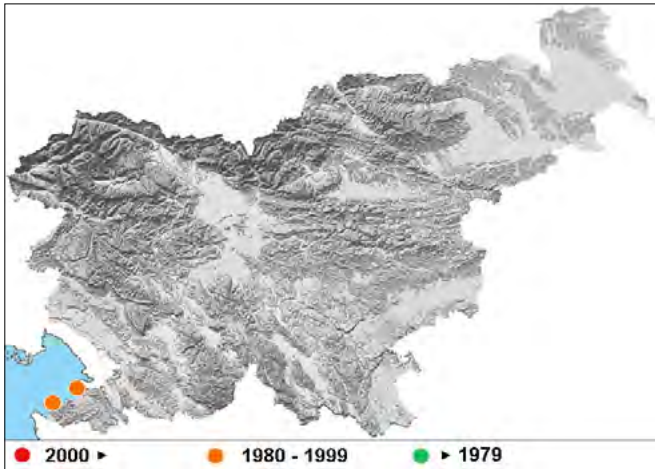
Andrena symphyti
Schmiedeknecht, 1883



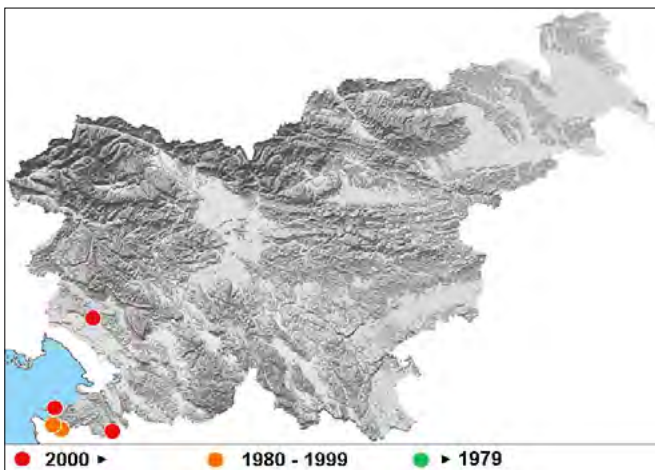
Andrena vulpecula
Kriechbaumer, 1873



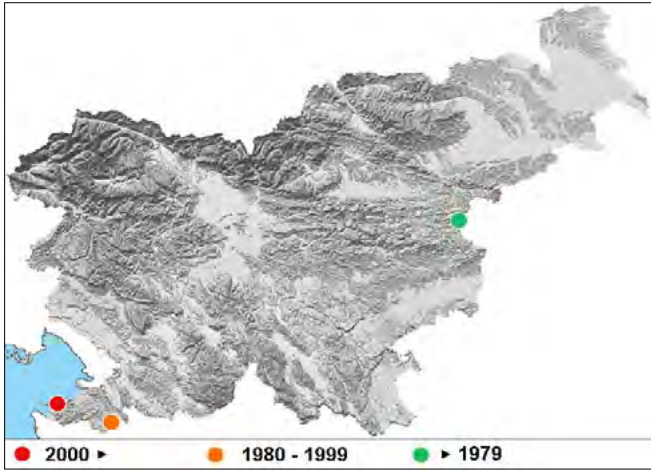
Andrena hyemala Warncke, 1973



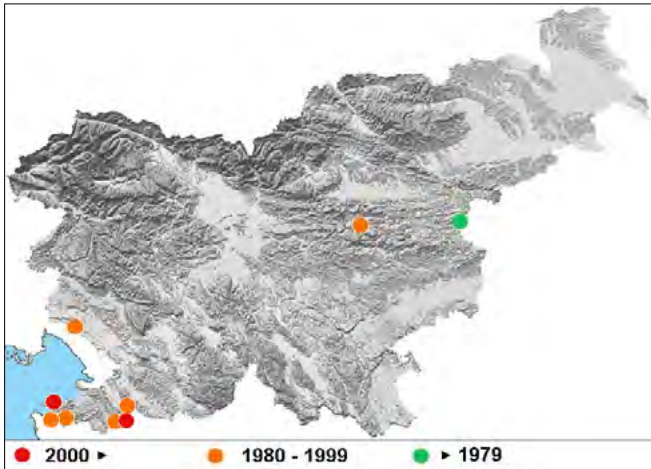
Andrena impunctata Pérez, 1895



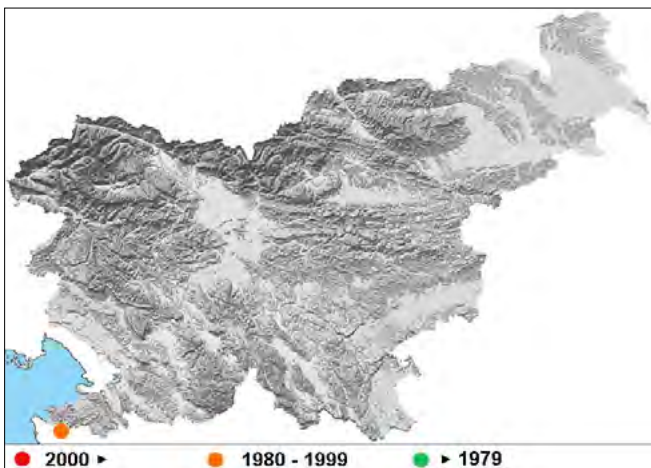
Andrena decipiens Schenck, 1861



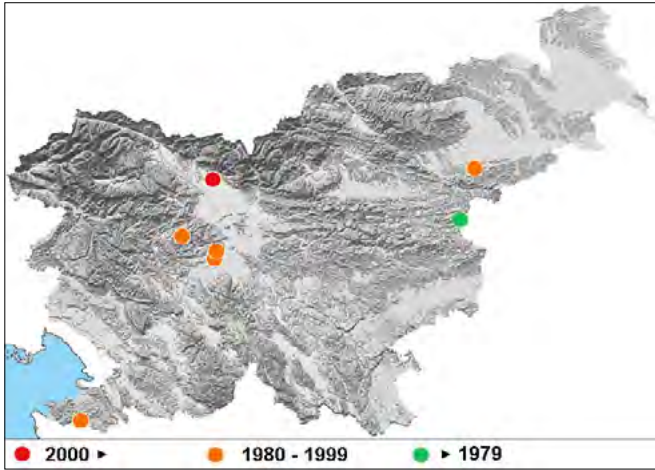
Andrena flavilabris Schenck, 1874



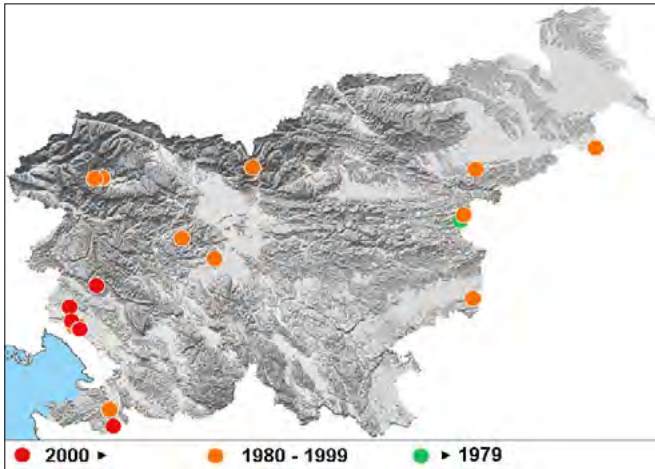
Andrena labialis (Kirby, 1802)



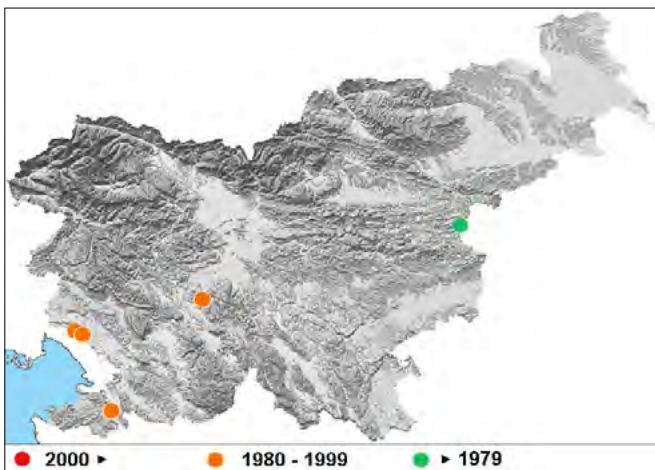
Andrena variabilis Smith, 1853



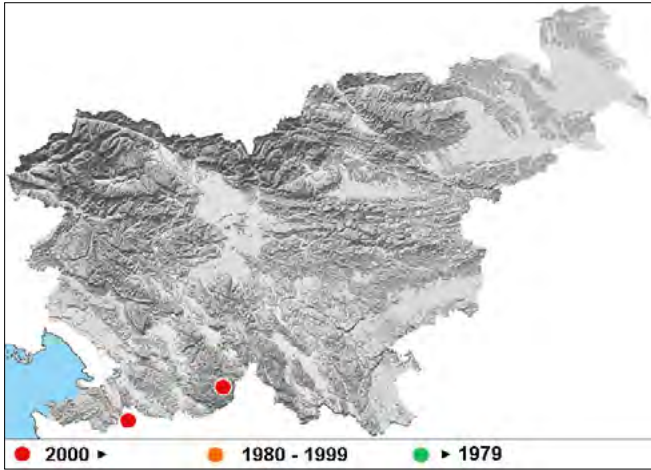
Andrena bucephala Stephens, 1846



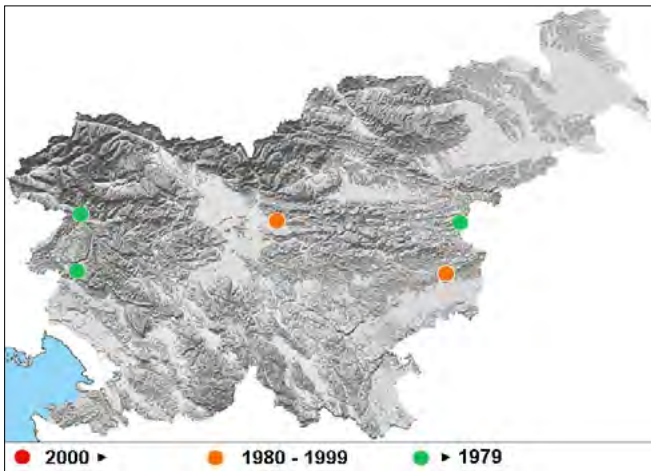
Andrena carantonica Pérez, 1902



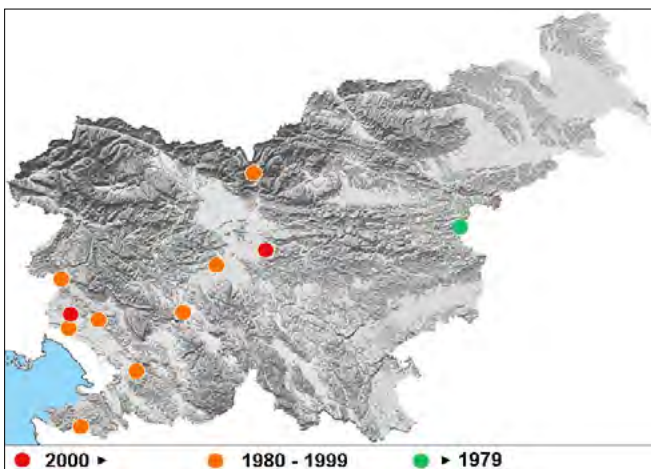
Andrena ferox Smith, 1847



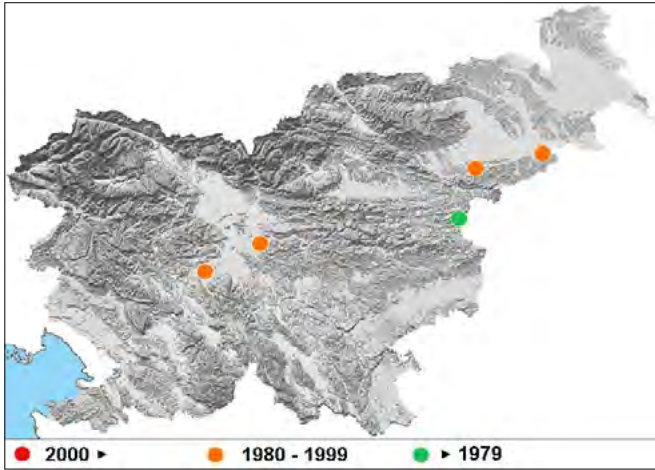
Andrena nuptialis Pérez, 1902



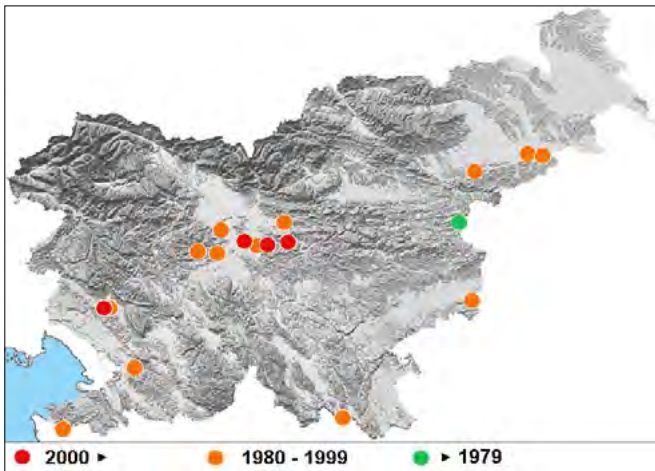
Andrena rosae Panzer, 1801



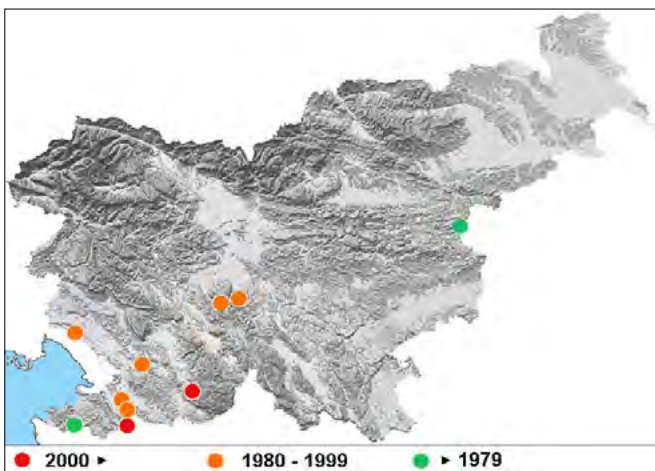
Andrena spinigera (Kirby, 1802)



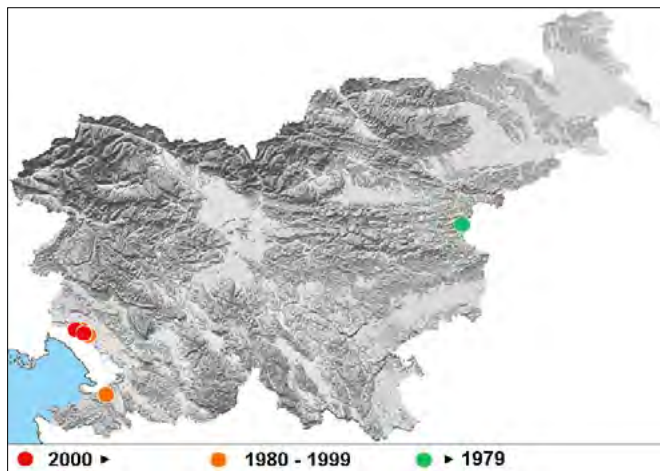
Andrena stragulata Illiger, 1806



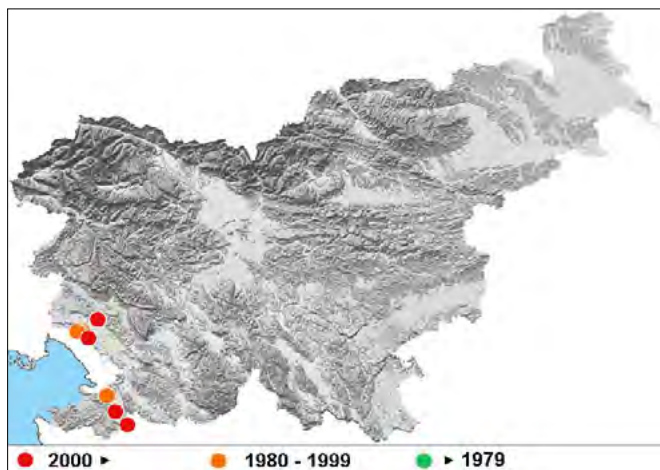
Andrena ventralis Imhoff, 1832



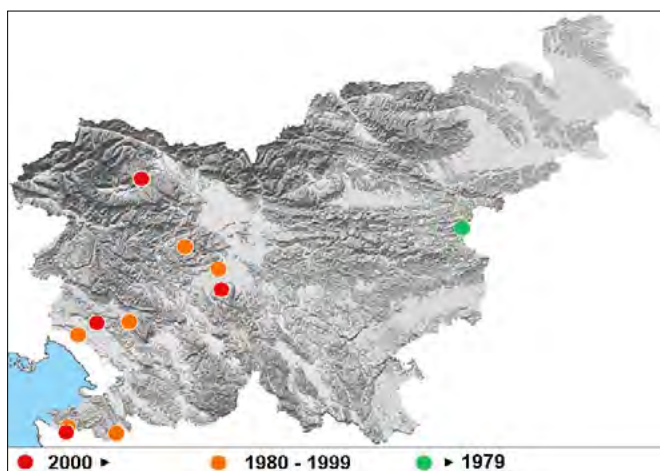
Andrena curvungula Thomson, 1870



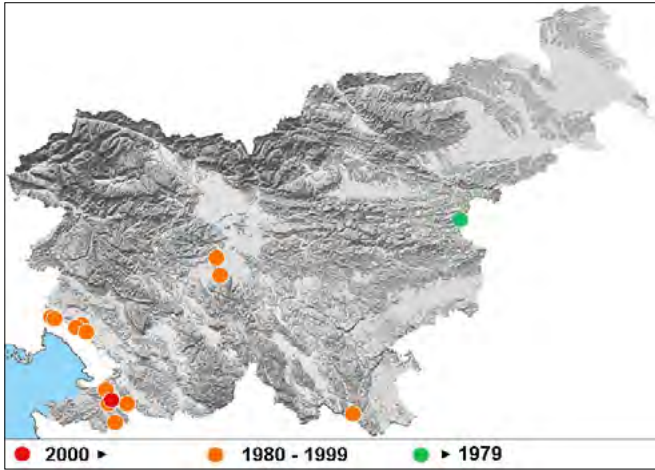
Andrena dorsalis Brullé, 1832



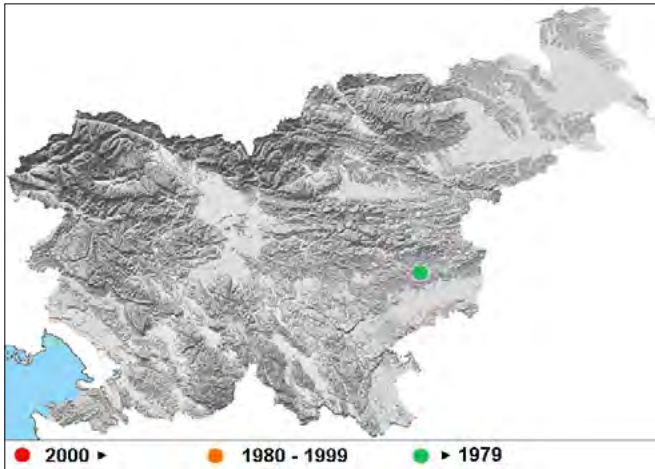
Andrena florivaga Eversmann, 1852



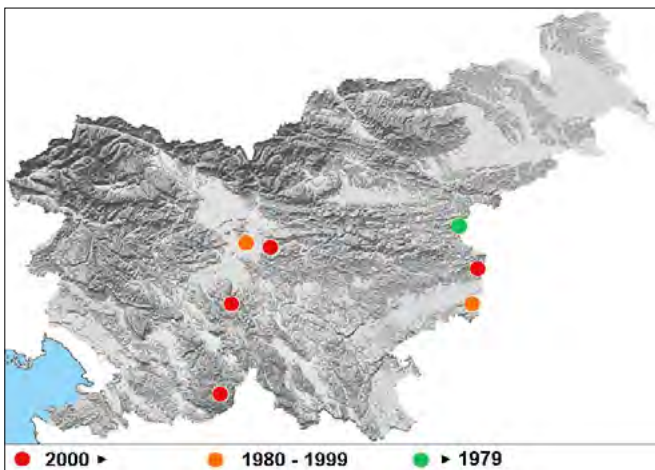
Andrena pandellei Pérez, 1895



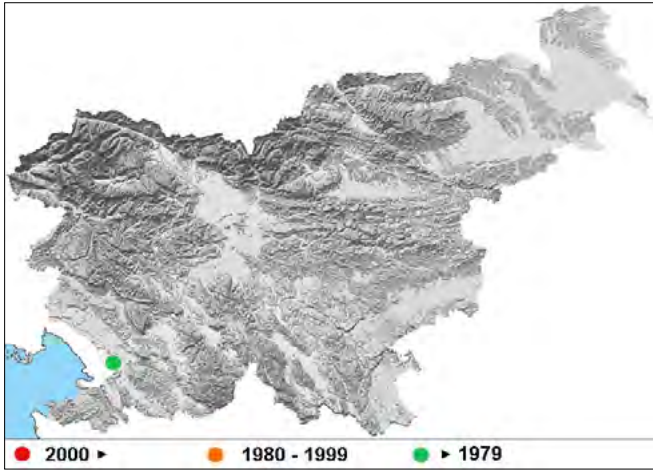
Andrena paucisquama
Noskiewicz, 1924



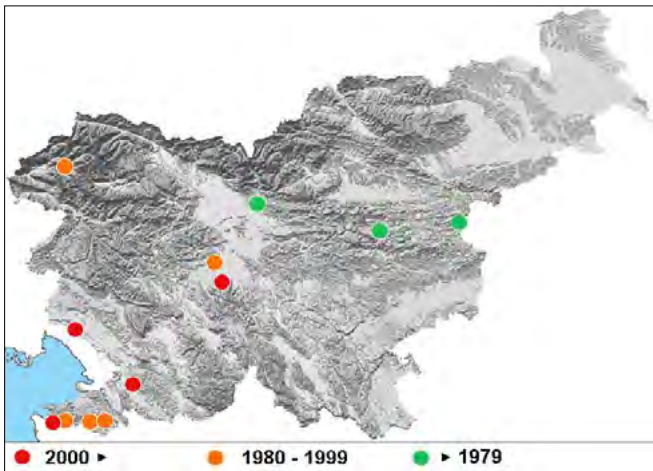
Andrena argentata Smith, 1844



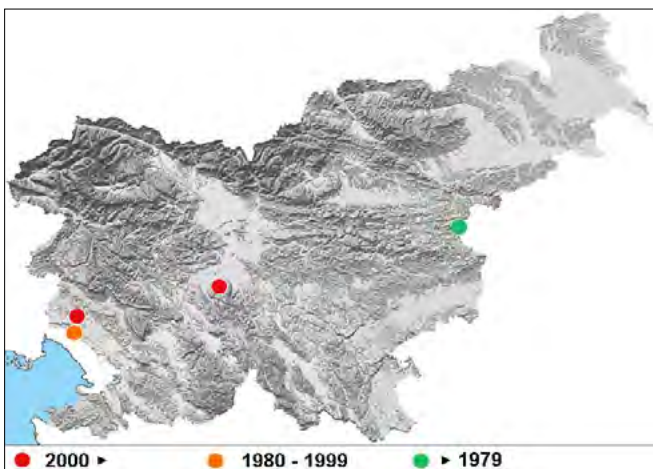
Andrena barbilabris (Kirby, 1802)



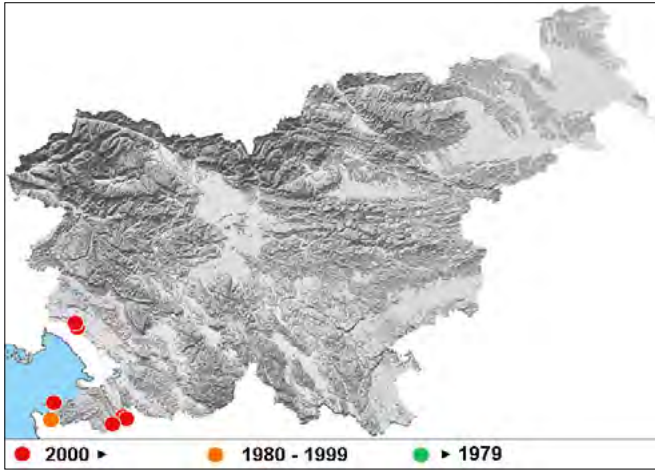
Andrena parviceps
Kriechbaumer, 1873



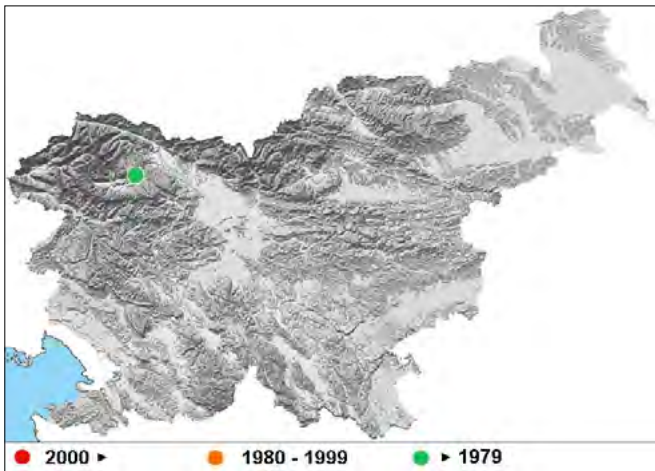
Andrena marginata Fabricius, 1776



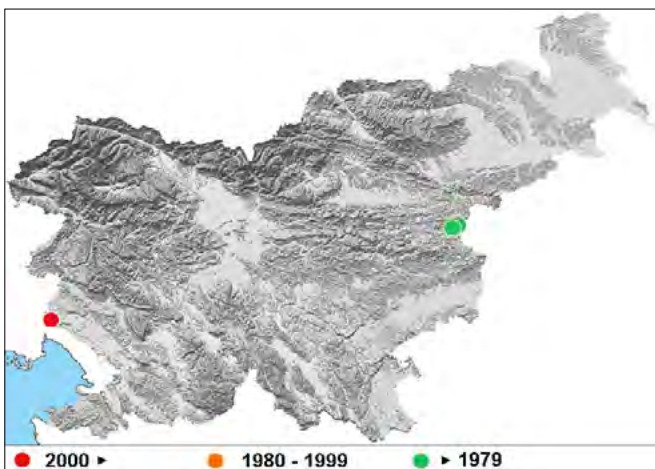
Andrena pellucens Pérez, 1895



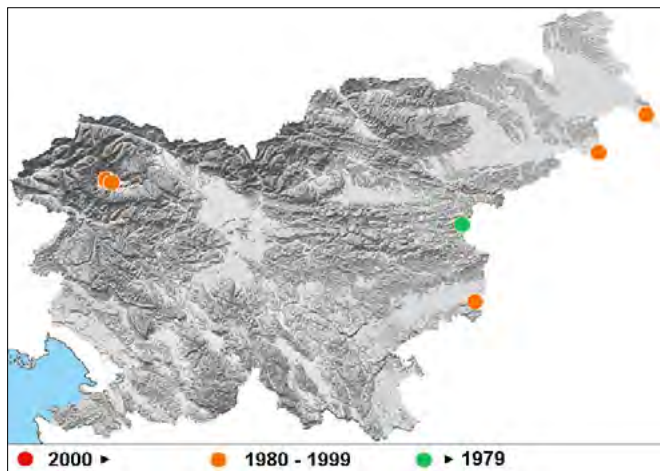
Andrena albopunctata (Rossi, 1792)



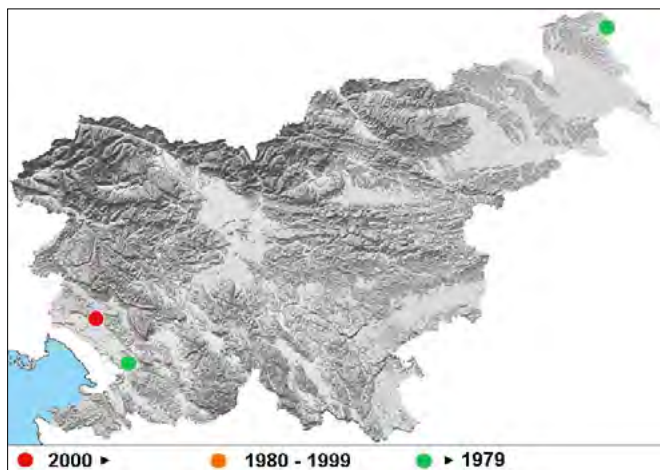
Andrena barbareae Panzer, 1805



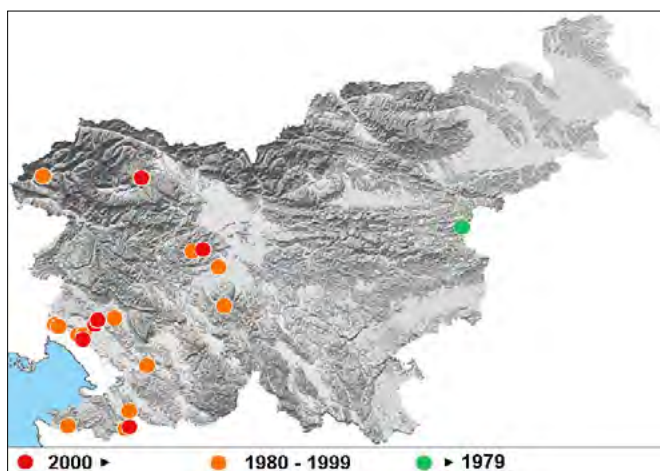
Andrena danuvia E. Stoeckert, 1950



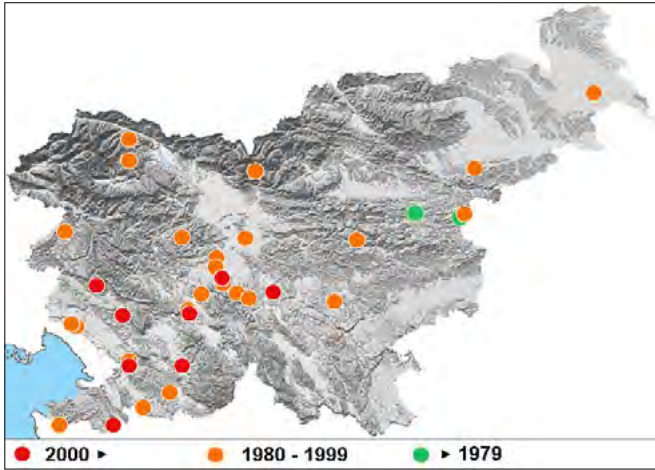
Andrena limata Smith, 1853



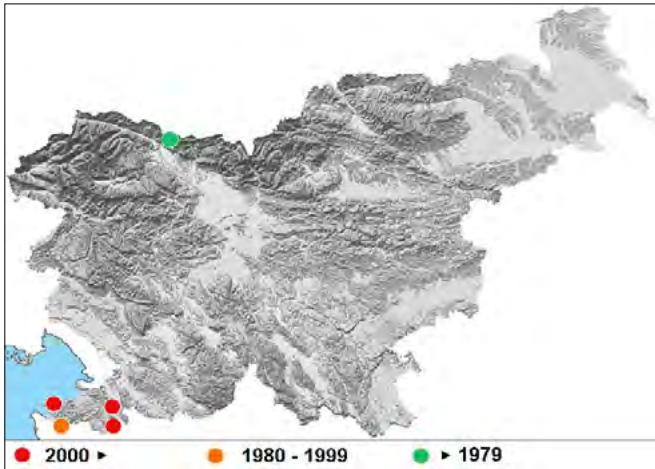
Andrena morio Brullé, 1832



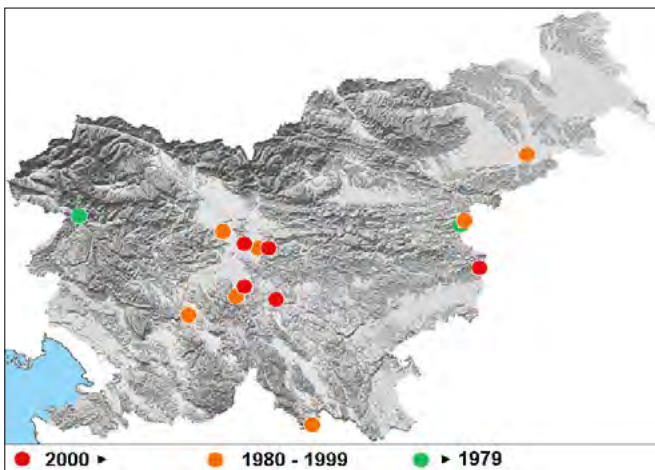
Andrena nigroaenea (Kirby, 1802)



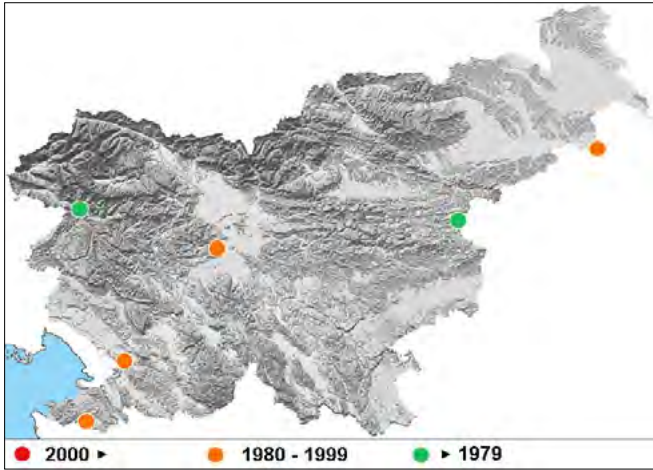
Andrena nitida (Müller, 1776)



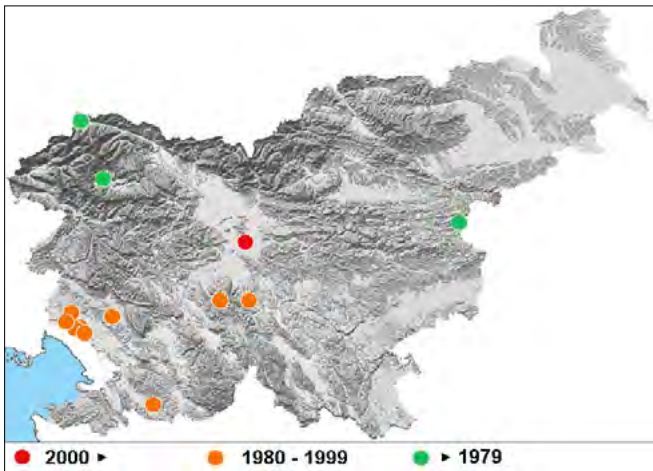
Andrena thoracica (Fabricius, 1775)



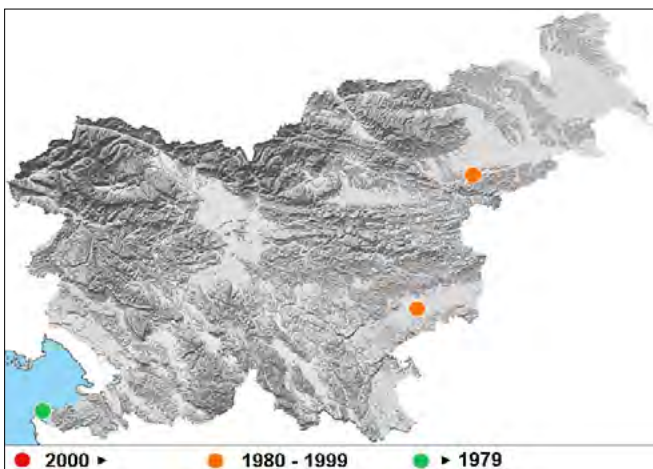
Andrena vaga Panzer, 1799



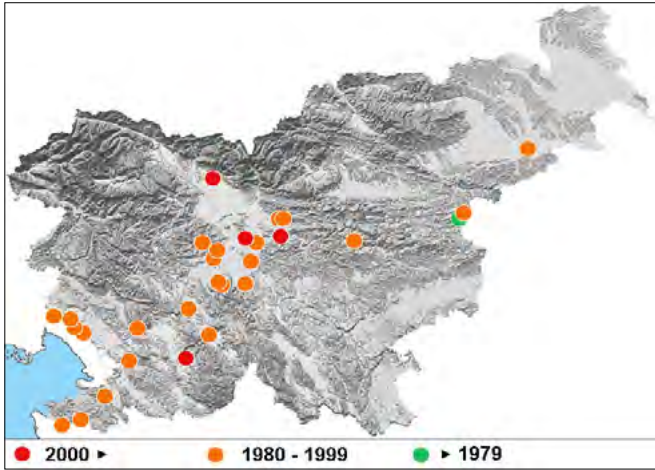
Andrena alfkenella Perkins, 1914



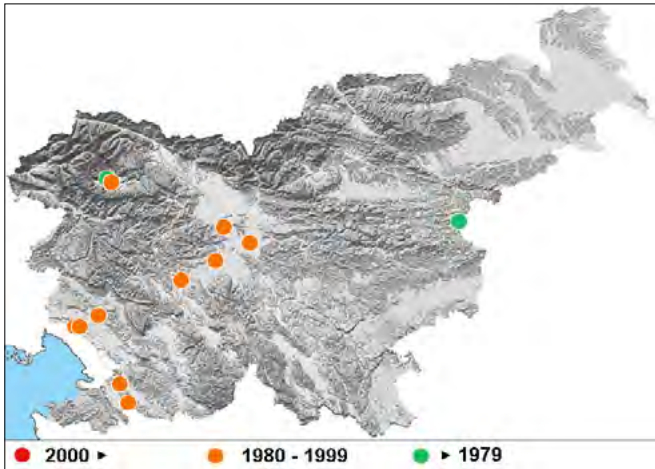
Andrena falsifica Perkins, 1915



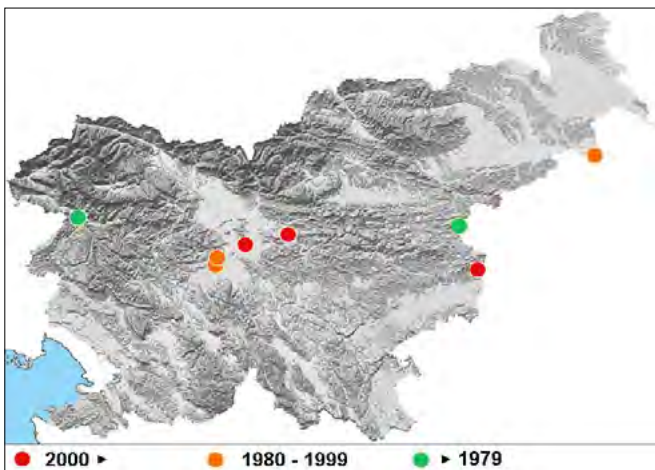
Andrena floricola Eversmann, 1852



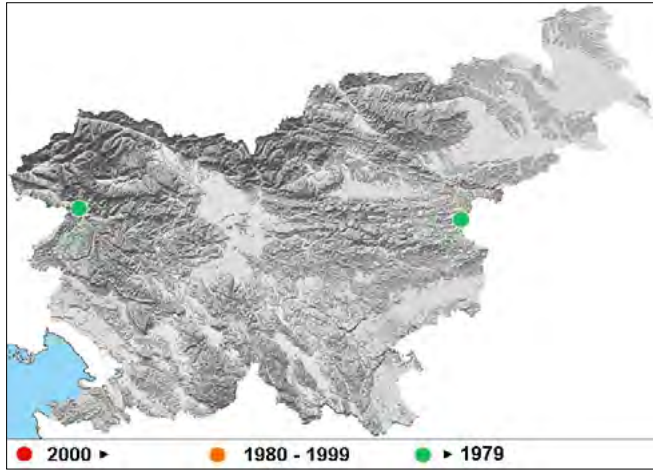
Andrena minutula (Kirby, 1802)



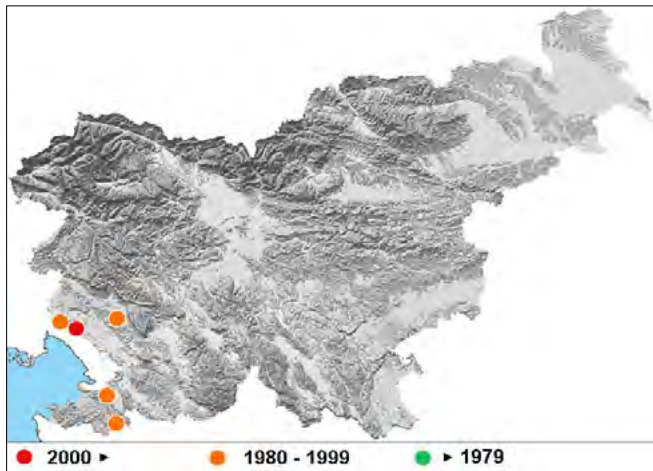
Andrena minutuloides Perkins, 1914



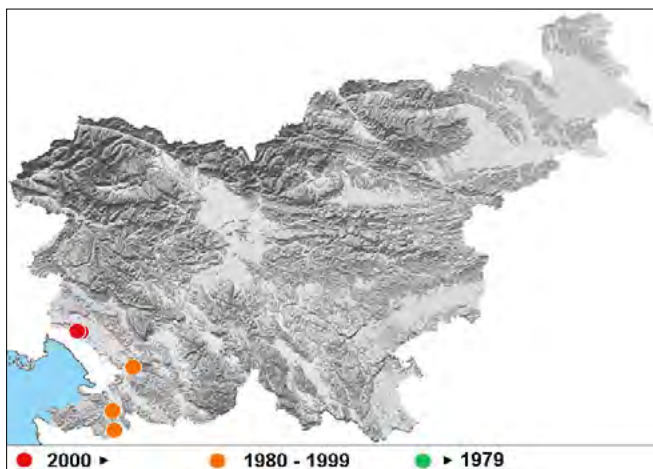
Andrena nana (Kirby, 1802)



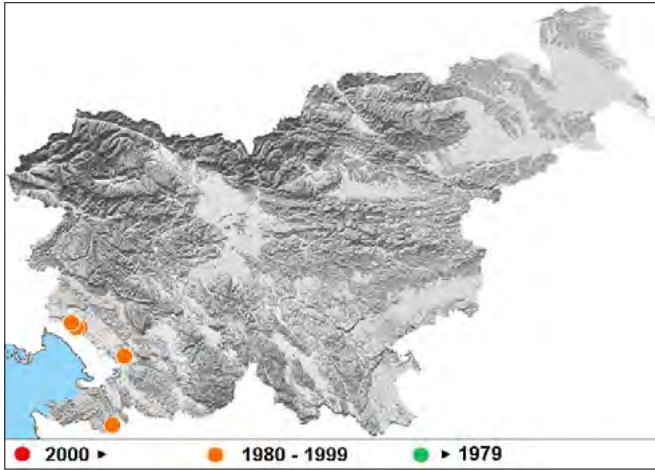
Andrena nanula Nylander, 1848



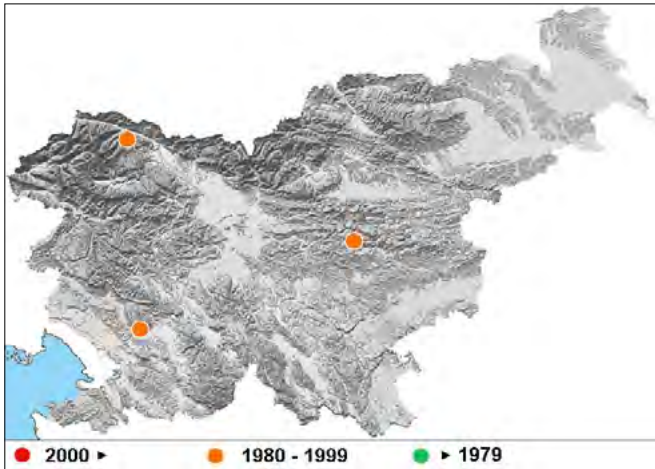
Andrena niveata Friese, 1887



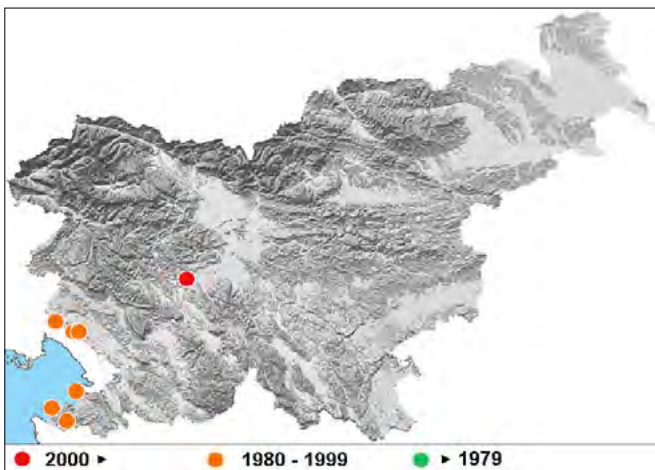
Andrena rugulosa Stoeckert, 1935



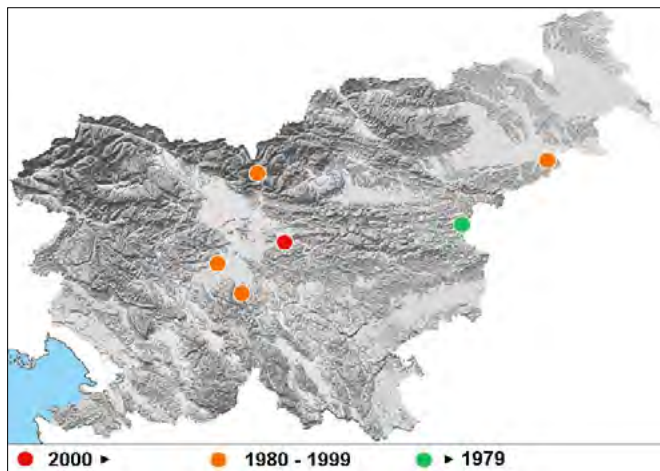
Andrena saxonica Stoeckert, 1935



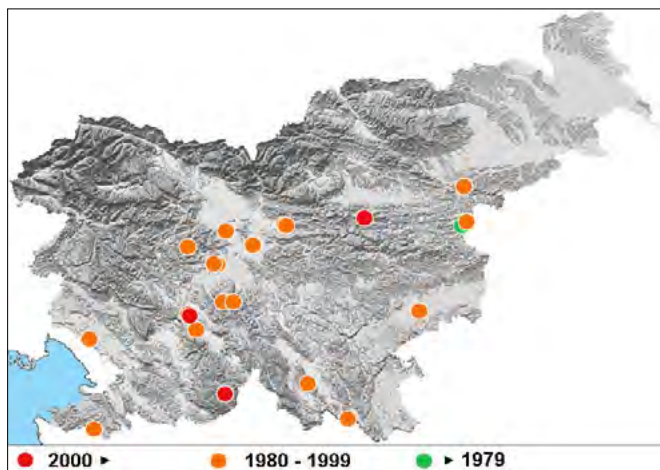
Andrena semilaevis Pérez, 1903



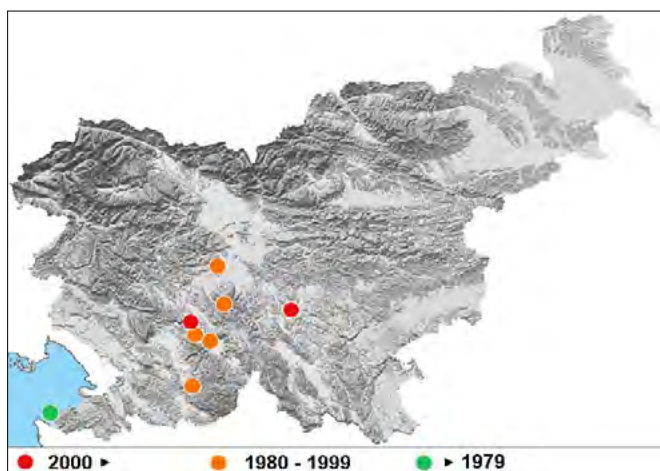
Andrena simontornyella
Noskiewicz, 1939



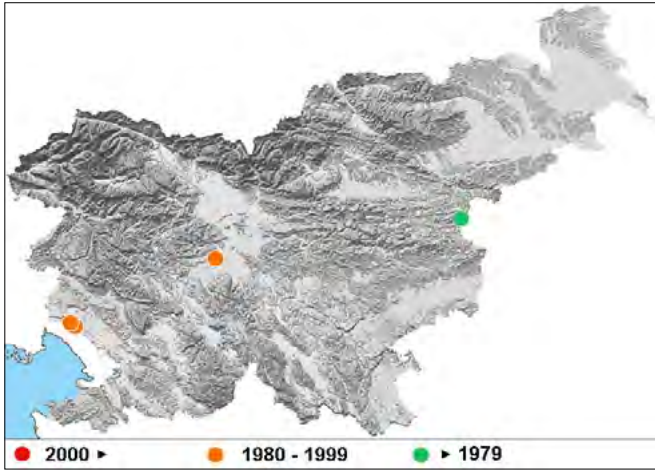
Andrena strohella Stoeckert, 1928



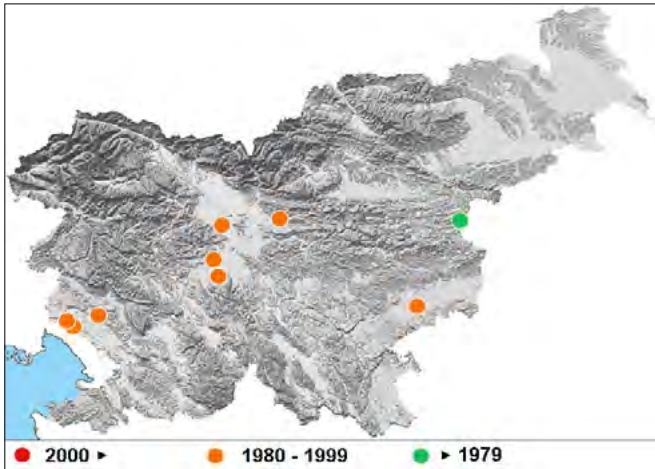
Andrena subopaca Nylander, 1848



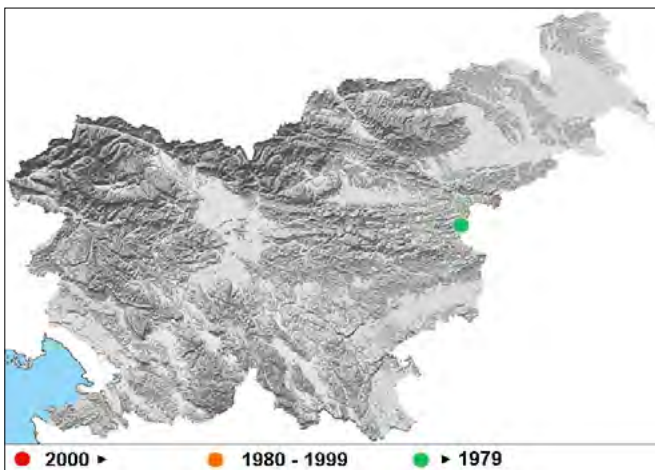
Andrena chrysoceles (Kirby, 1802)



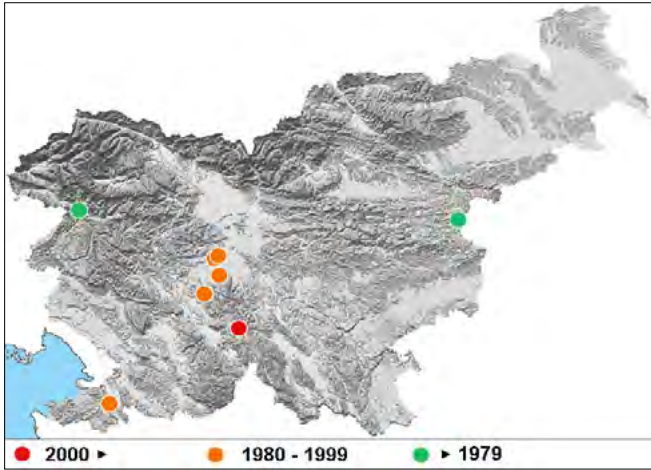
Andrena curvana Warncke, 1965



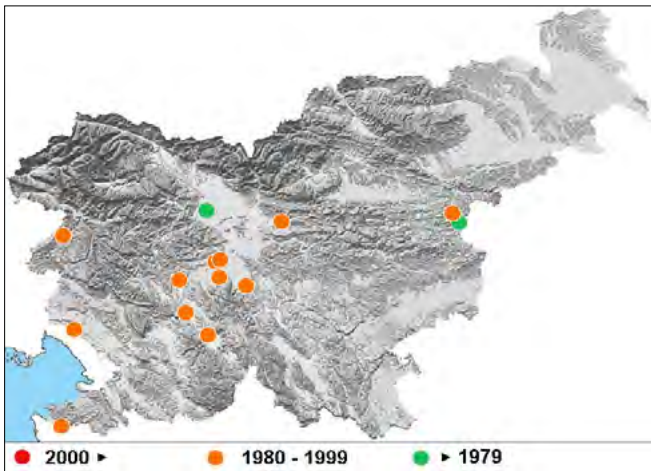
Andrena fulvicornis Schenck, 1853



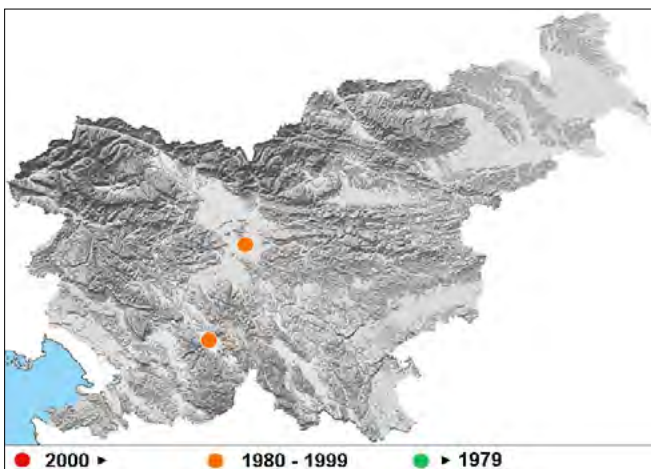
Andrena griseobalteata Dours, 1872



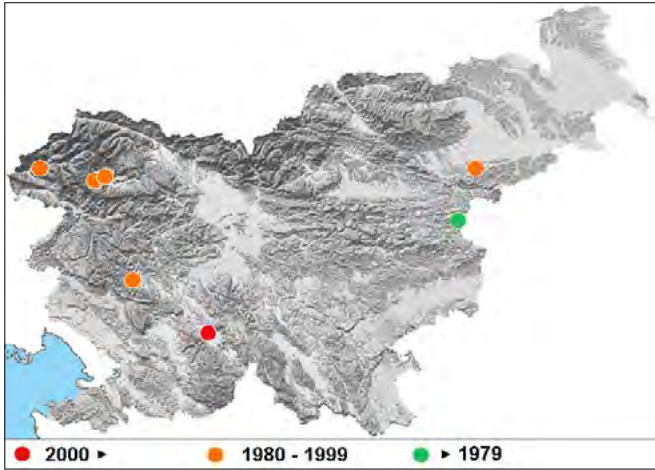
Andrena nitidiuscula Schenck, 1853



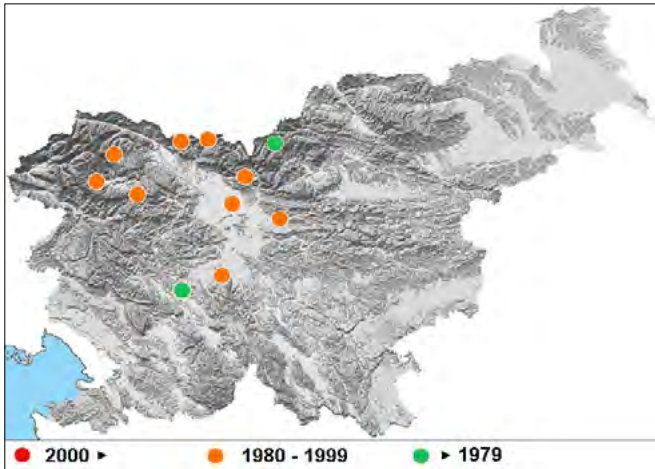
Andrena pallitarsis Pérez, 1903



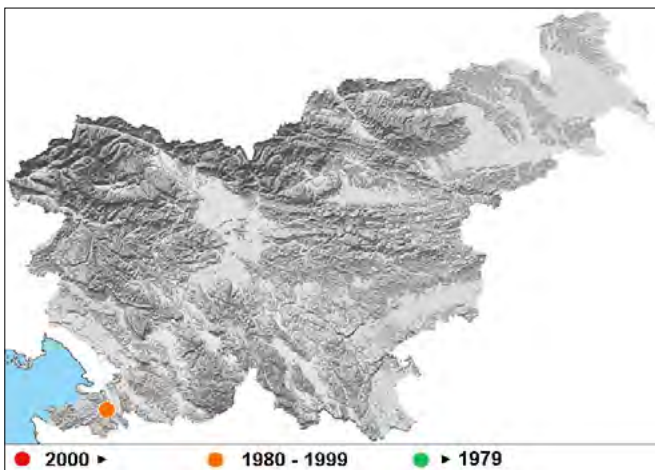
Andrena pontica Warncke, 1972



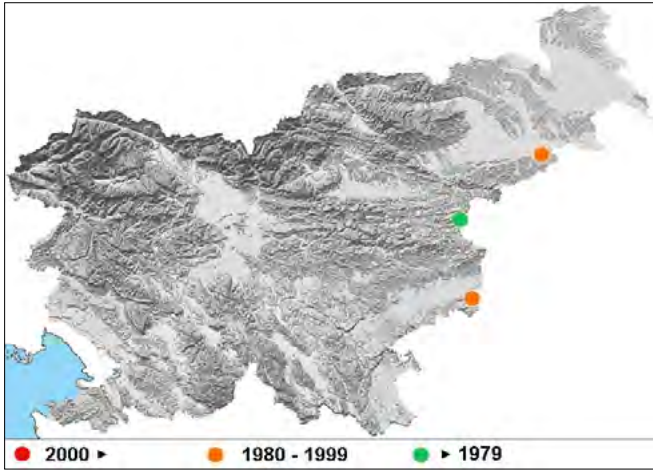
Andrena schencki Morawitz, 1866



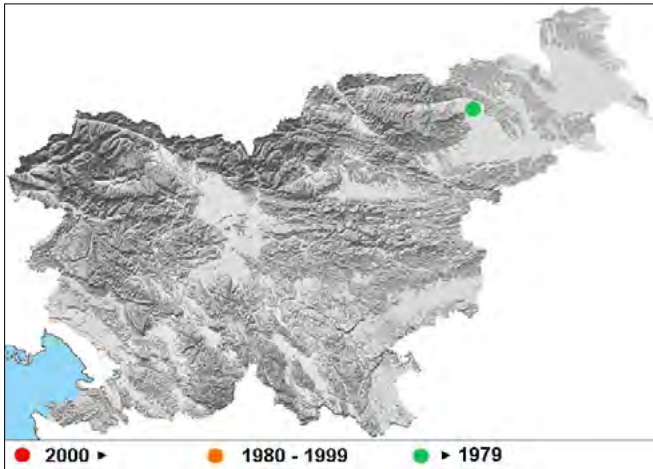
Andrena coitana (Kirby, 1802)



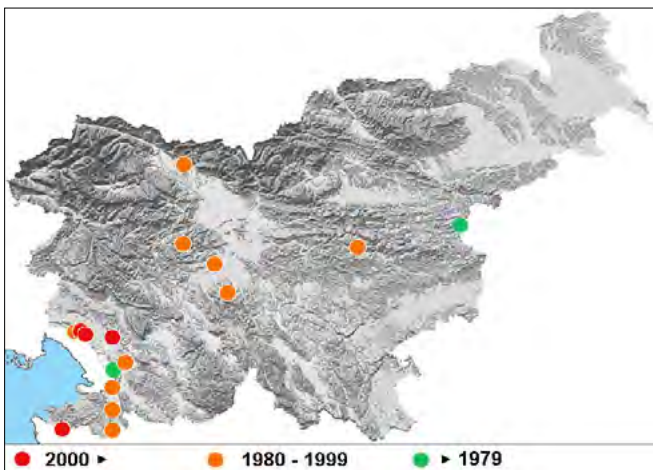
Andrena atrata Friese, 1887



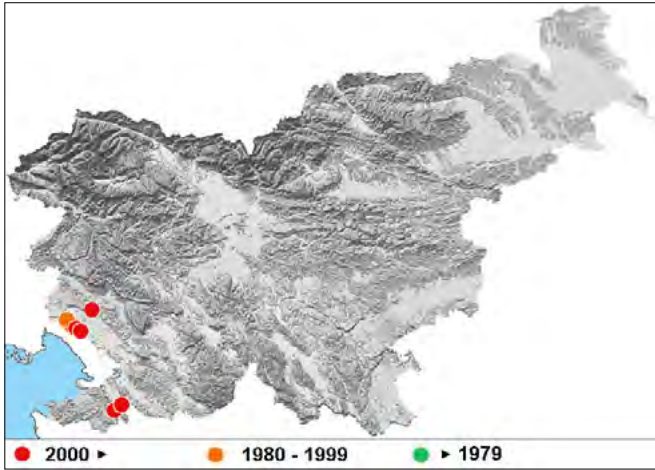
Andrena bimaculata (Kirby, 1802)



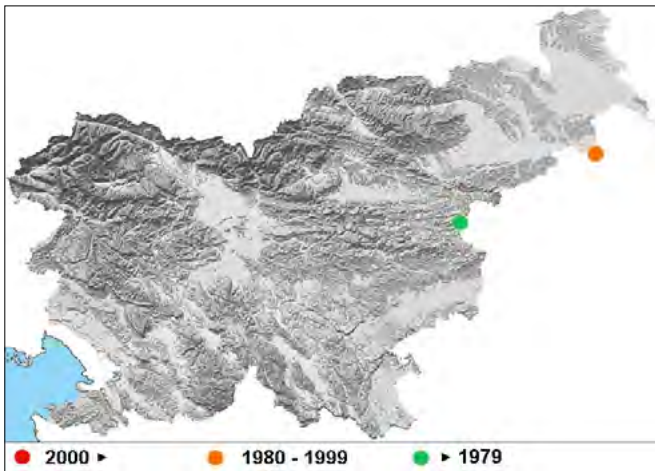
Andrena tibialis (Kirby, 1802)



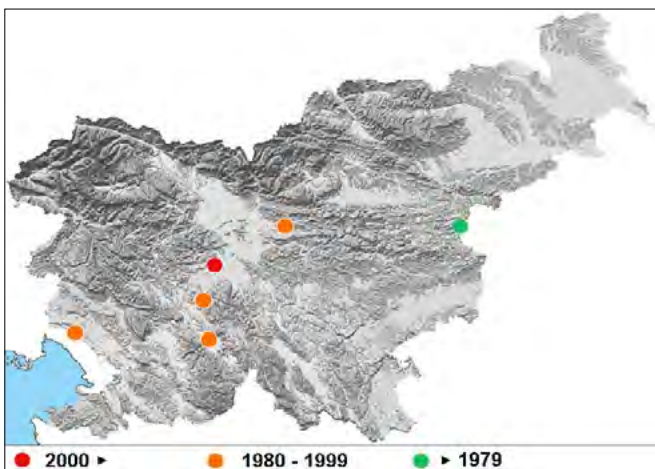
Andrena labiata Fabricius, 1781



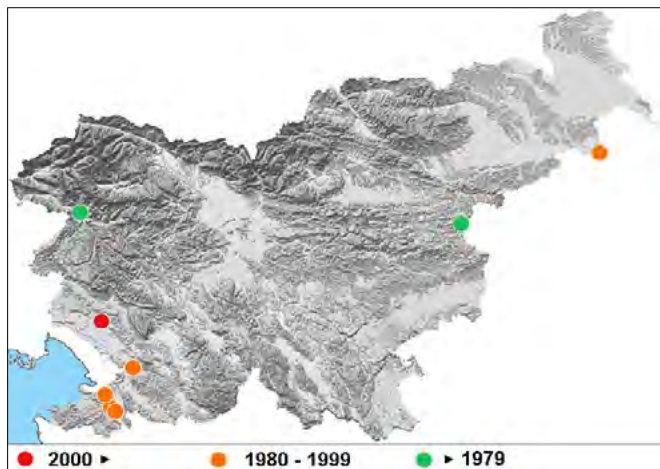
Andrena potentillae Panzer, 1809



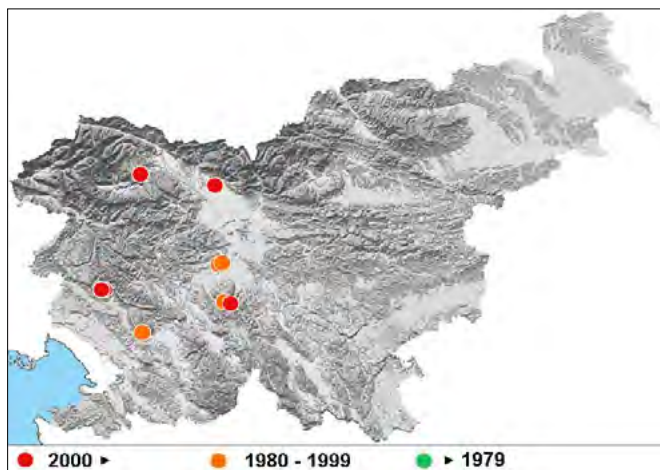
Andrena seminuda Friese, 1896



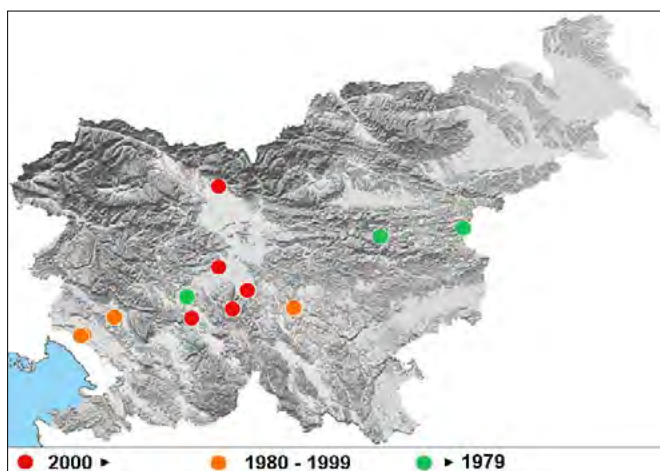
Andrena viridescens Viereck, 1916



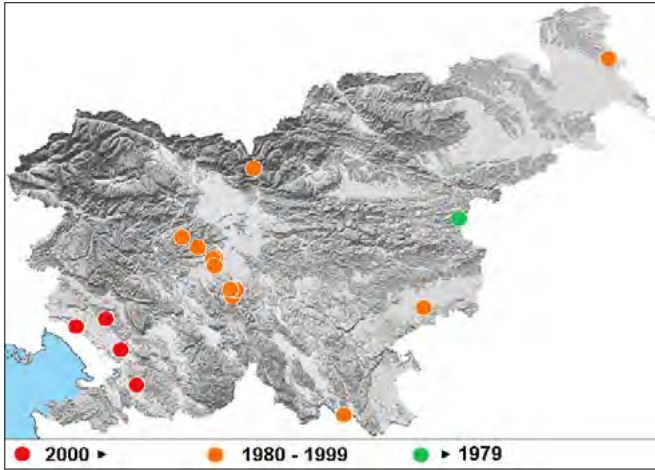
Andrena florea Fabricius, 1793



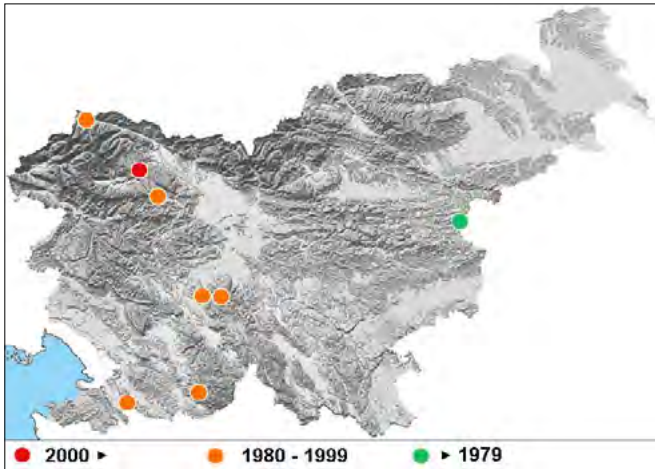
Andrena alutacea Stoeckert, 1942



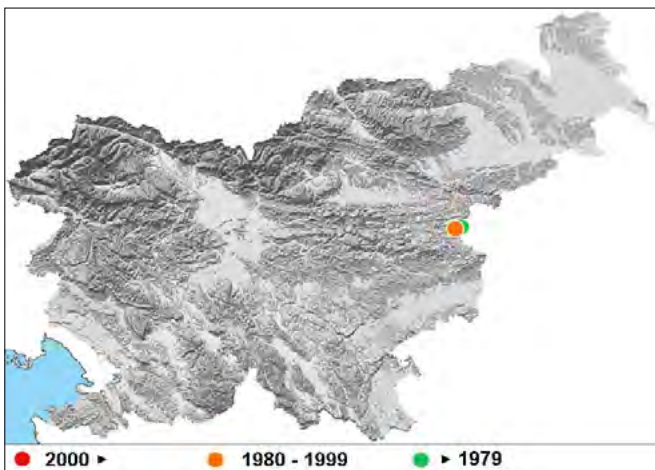
Andrena proxima (Kirby, 1802)



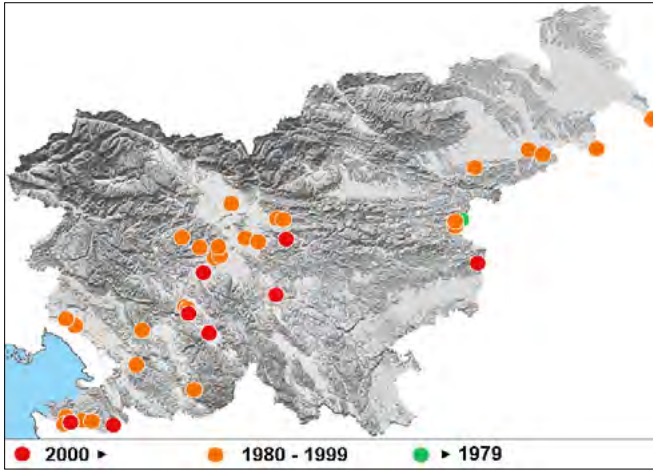
Andrena fulvata Stoekher, 1930



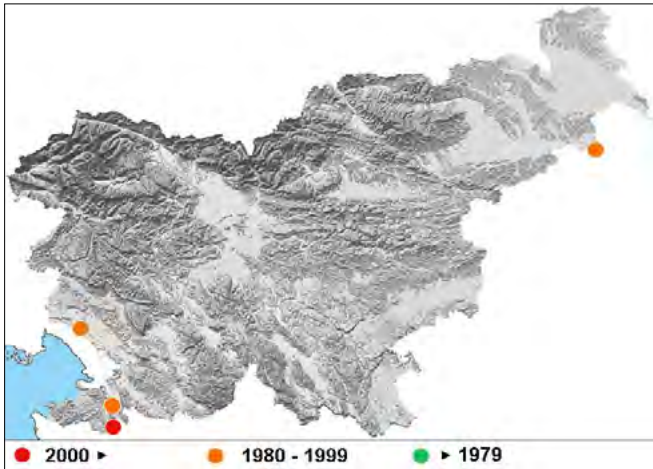
Andrena combinata (Christ, 1791)



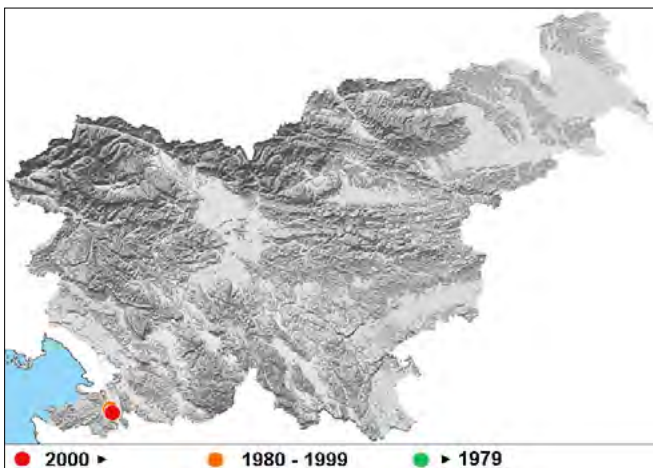
Andrena congruens
Schmiedeknecht, 1883



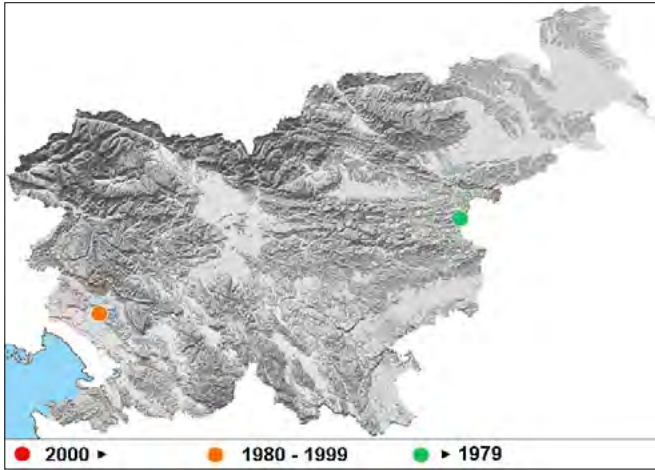
Andrena dorsata (Kirby, 1802)



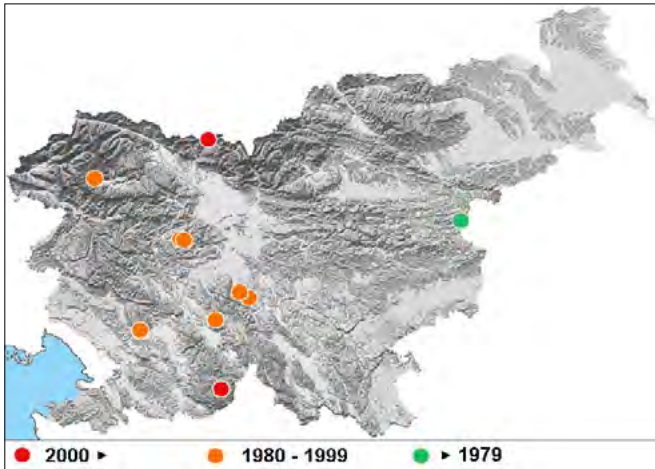
Andrena susterai Alfken, 1914



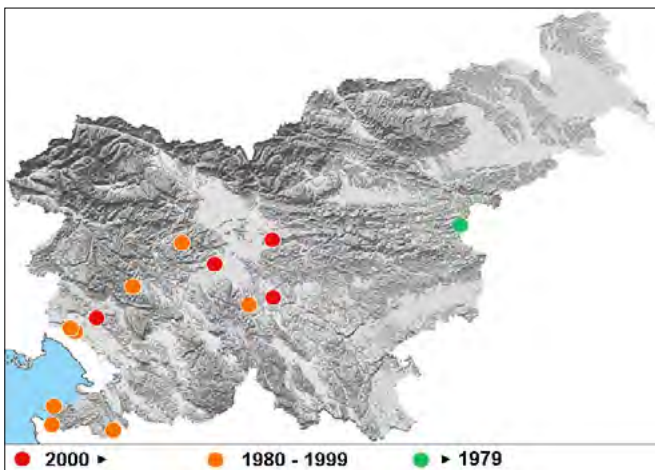
Andrena thomsoni Ducke, 1898



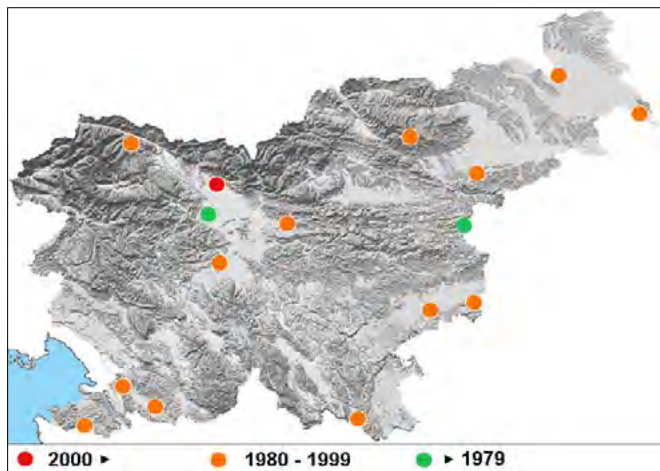
Andrena aberrans Eversmann, 1852



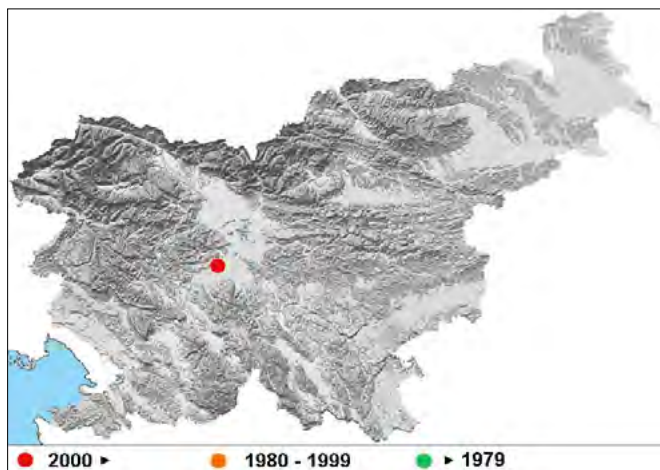
Andrena intermedia Thomson, 1872



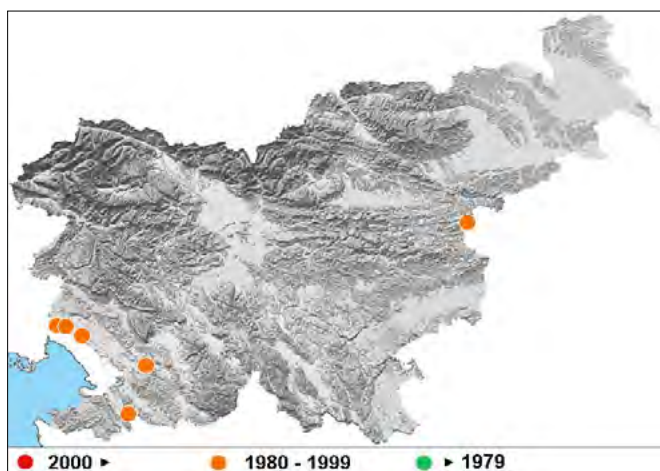
Andrena lathyri Alfken, 1899



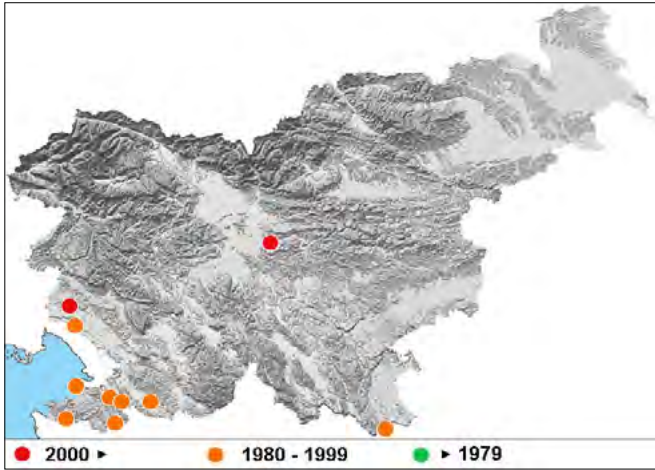
Andrena ovatula (Kirby, 1802)



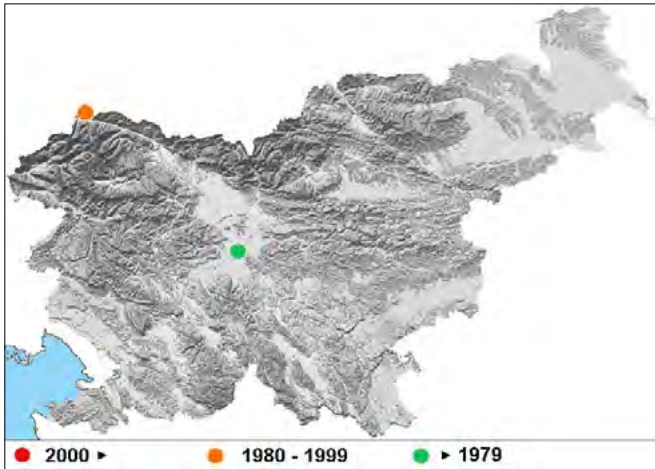
Andrena producta Warncke, 1973



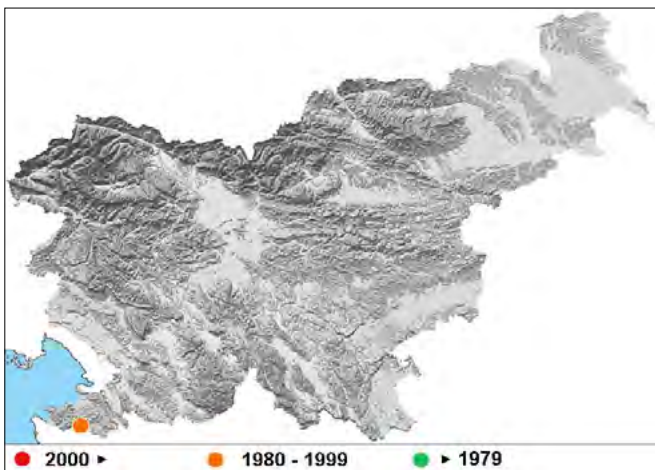
Andrena similis Smith, 1849



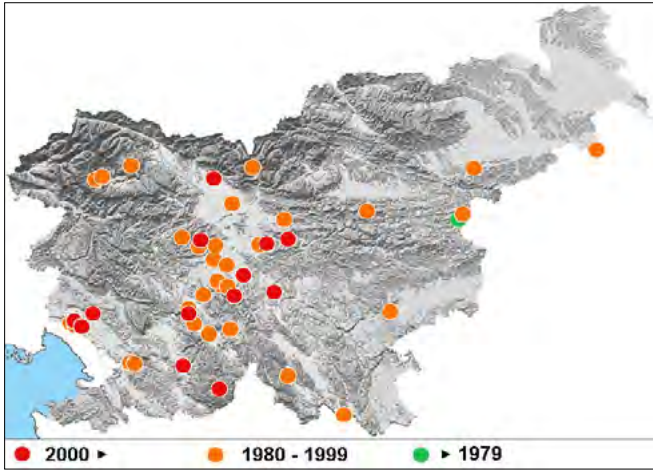
Andrena wilkella (Kirby, 1802)



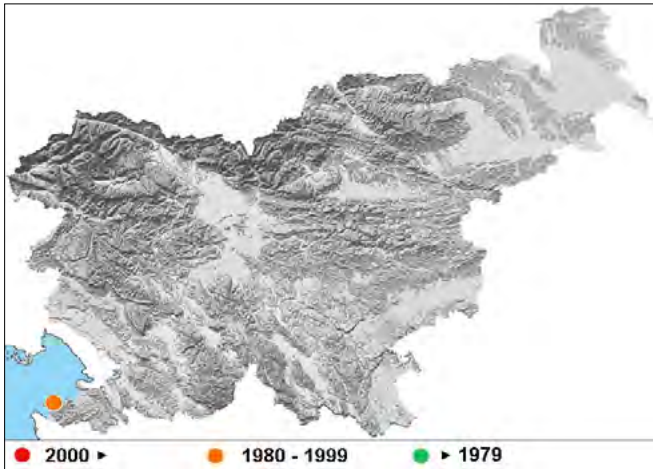
Andrena tarsata Nylander, 1848



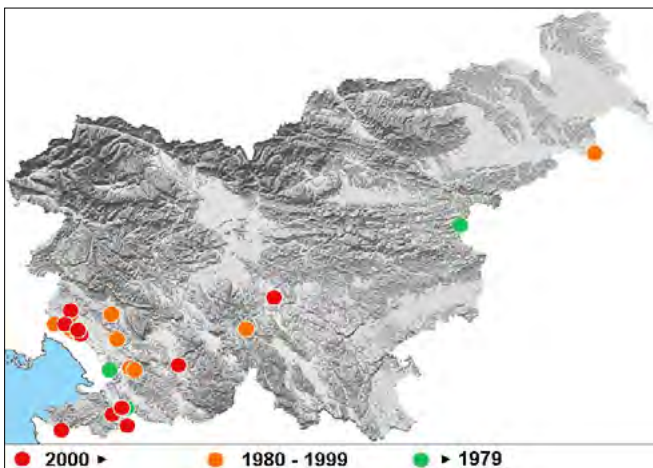
Andrena hypopolia
Schmiedeknecht, 1883



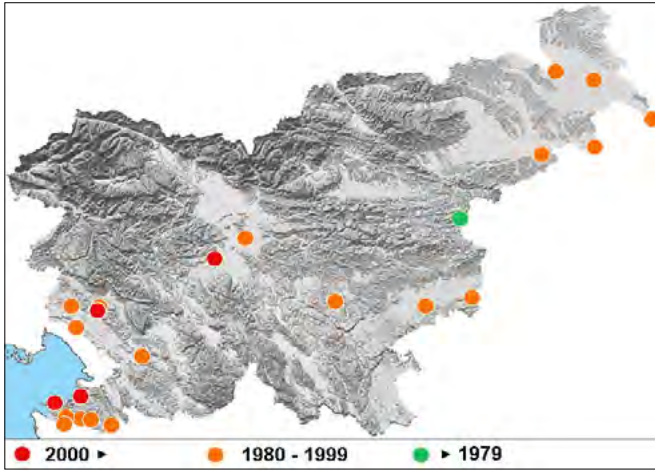
Andrena haemorrhoa
(Fabricius, 1781)



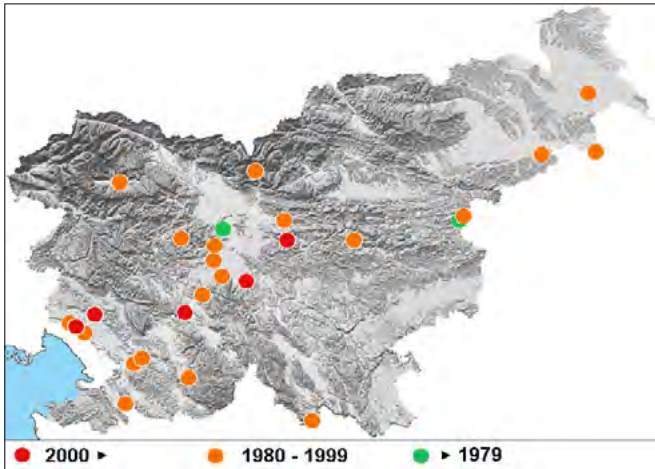
Andrena truncatilabris
Morawitz, 1878



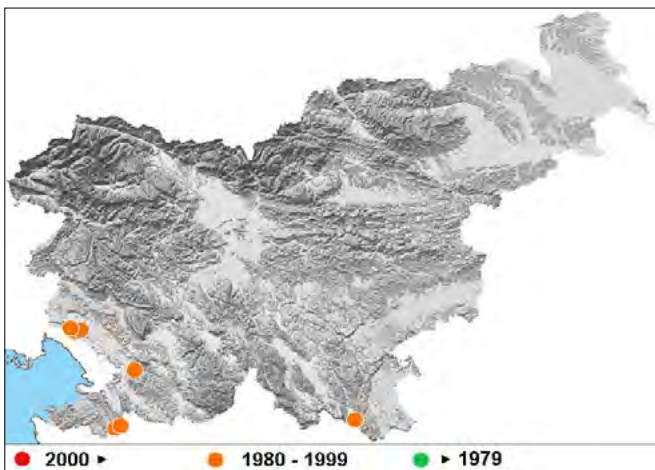
Andrena tscheki Morawitz, 1872



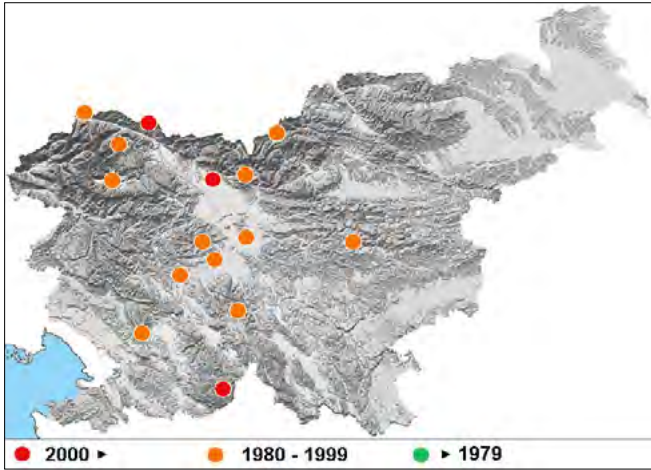
Andrena flavipes Panzer, 1799



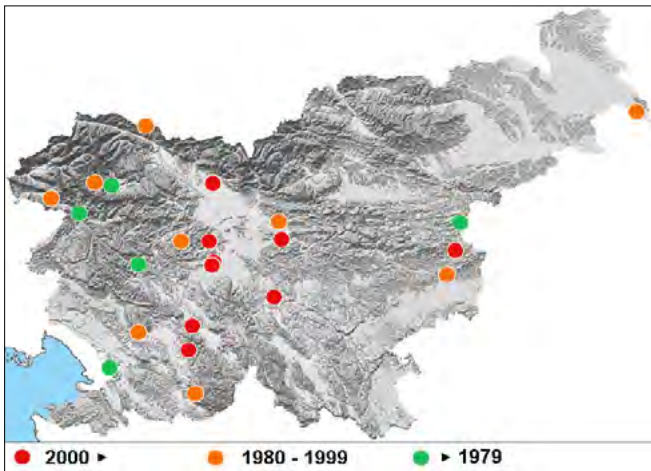
Andrena gravida Imhoff, 1832



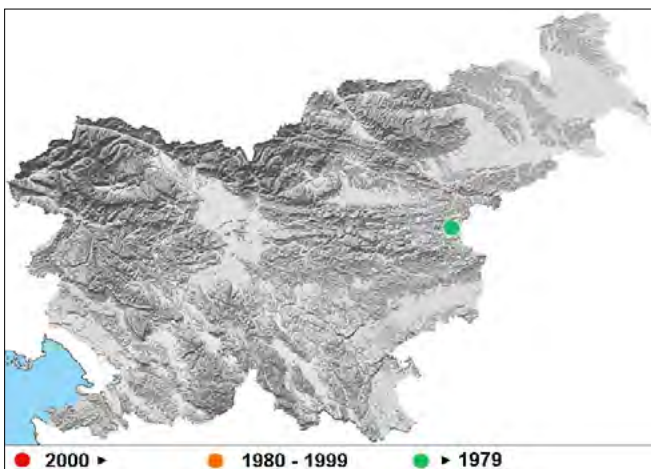
Andrena korleviciana Friese, 1887



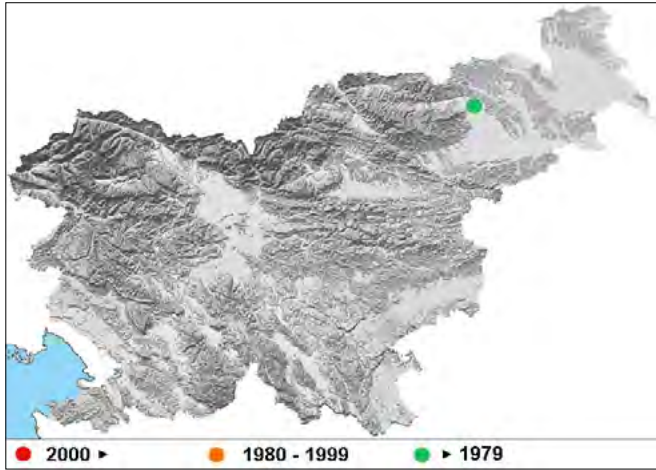
Panurgus banksianus (Kirby, 1802)



Panurgus calcaratus (Scopoli, 1763)



Camptopoeum frontale
(Fabricius, 1804)



Melitturga clavicornis
(Latreille, 1806)

Zaključki

Do zdaj je bilo v Sloveniji zabeleženih 131 vrst iz družine Andrenidae. Velika večina, 126 vrst, pripada poddružini Andreninae in rodu *Andrena* Fabricius. Le pet vrst pripada poddružini Panurginae, tri rodu *Panurgus* Panzer (ena vrsta, *P. dentipes* Latreille, z vprašajem), ena rodu *Camptopoeum* Spinola in ena rodu *Melitturga* Latreille. Zanimivo, da ni bila v Sloveniji najdena nobena vrsta rodu *Panurginus* Nylander, čeprav je rod pogost v Alpah in gorah Balkanskega polotoka.

Glede na priljubljenost cvetov hranilnih rastlin je 70 vrst (54 %) družine Andrenidae polilektničnih (mnogobralnih) in 58 vrst (44 %) oligolektničnih (malobralnih), specializiranih za določeno družino, poddružino ali rod rastlin. 97 vrst (74 %) je univoltinih (z eno generacijo na leto) in 33 vrst (26 %) bivoltinih (dve generaciji na leto). Največ vrst, 45 (35 %) je mediteranskih po razširjenosti, 12 od teh vzhodnomediterskih, 3 zahodnomediterske, 12 severnomediterskih in ena evromediterska vrsta. 31 vrst (24 %) je evropskih, ena od njih zahodnoevropska. 32 vrst (23 %) je palearktičnih, 18 od teh zahodnopalearktičnih. 9 vrst je evrosibirskih, 5 pontskih, 3 holarktične, 3 boreomontanske, ena alpska (*Andrena rogenhoferi* Morawitz) in ena balkansko apeninska (*Andrena korleviciana* Friese).

Zaradi izjemnih vremenskih razmer, izgube habitata in morda tudi širjenja boleznih so nekatere nekoč pogoste vrste v zadnjem času izginile. Tak primer je *Andrena ovatula* (Kirby), ki je tudi na Evropskem rdečem seznamu čebel potencialno ogrožena vrsta. Po drugi strani je *Andrena hattorfiana* (Fabricius), z enakih statusom na Evropskem rdečem seznamu, še vedno široko razširjena v Sloveniji in tu ni ogrožena (GOGALA 2018b).

Po zaslugi informacij, ki jih je podal SCOPOLI (1763), je njegova *Apis atra*, ki so jo do zdaj imeli za sinonim vrste *Andrena cineraria* (Linnaeus), sinonimizirana z vrsto *Andrena barbareae* Panzer, edino vrsto iz skupine *A. cineraria*, ki je dejavna poleti, ko cveti hranilna rastlina, ki jo omenja Scopoli.

Conclusions

So far, 131 species of Andrenidae have been registered in Slovenia. A great majority, 126 species, belong to the subfamily Andreninae and to the genus *Andrena* Fabricius. Only five species belong to the Panurginae, three to the genus *Panurgus* Panzer (one species, *P. dentipes* Latreille, with a doubt), one to *Camptopoeum* Spinola and one to *Melitturga* Latreille. Interestingly, no *Panurginus* Nylander species have been found in Slovenia as yet, although the genus is common in the Alps and the mountains of the Balkan peninsula.

As far as flower preferences are concerned, 70 species (54%) of Andrenidae are polylectic and 58 species (44%) are oligolectic, specialized for a certain plant family, subfamily or genus. 97 species (74%) are univoltine (with one generation a year) and 33 species (26%) bivoltine (two generations a year). The largest number of species, 45 (35%), are Mediterranean by distribution, 12 of them East Mediterranean, 3 West Mediterranean, 12 North Mediterranean and one Euro-Mediterranean species. 31 species (24%) are European, one of them West European. There are 32 Palearctic species (23%), 18 of them West Palearctic. 9 species are Eurosiberian, 5 Pontic, 3 Holarctic, 3 Boreo-montane, one Alpine (*Andrena rogenhoferi* Morawitz) and one Balkan-Apeninic species (*Andrena korleviciana* Friese).

Due to the extreme weather conditions, loss of habitat and possibly also spread of diseases, some species that were common in the past disappeared in recent times. Such an example is *Andrena ovatula* (Kirby), also on the European Red List of Bees as a Near Threatened species. On the other hand, *Andrena hattorfiana* (Fabricius) with the same status on the European Red List is still widespread in Slovenia and not threatened here (GOGALA 2018b).

Thanks to the information provided by SCOPOLI (1763), his *Apis atra*, until now thought to be a synonym of *Andrena cineraria* (Linnaeus), is synonymized with *Andrena*

Vrsta sicer po Scopoliju ni bila nikdar več najdena v Sloveniji. Iskal sem jo v Gorjušah, kjer jo je našel Scopoli, a neuspešno. Na isti hranilni rastlini (*Laserpitium latifolium*) sem našel vrsto *Andrena rogenhoferi*. To vrsto bi zlahka imenovali *Apis atra* (črna čebela), če upoštevamo njeno barvo, a ne ustreza Scopolijevemu opisu.

Vrsta *Andrena mocsaryi* Schmiedeknecht, 1883 je zaradi napačne določitve umaknjena s seznama vrst, prisotnih v Sloveniji.

barbareae Panzer, the only species of the *A. cineraria* group active in summer, when the foodplant mentioned by Scopoli blooms. The species, however, has never again been found in Slovenia after Scopoli. I searched for it at Gorjuše where Scopoli found it, but without success. I found *Andrena rogenhoferi* on the same foodplant (*Laserpitium latifolium*), a species that could also be named *Apis atra* (black bee) if its colour is taken into consideration. But it does not correspond with the description given by Scopoli.

Andrena mocsaryi Schmiedeknecht, 1883 is omitted from the list of species present in Slovenia due to misidentification.

Zahvale

Rad bi se zahvalil Paulu Westrichu za informacije o primerkih, v preteklosti obravnavanih kot *Andrena mocsaryi* iz Slovenije in Erwinu Scheuchlu, enemu od recenzentov, za dodatne literaturne podatke, kot tudi za podatek iz njegove zbirke.

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